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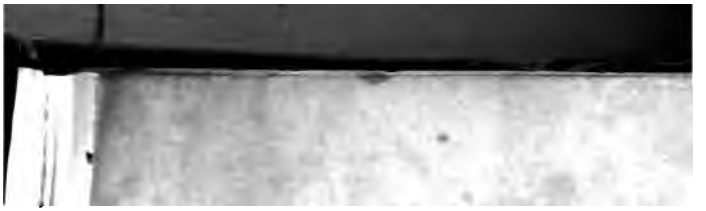

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THE

Medico-Chirurgical Review,

AND

JOURNAL

OF

MEDICAL SCIENCE.

(Quarterly.)

EXHIBITING A COMPREHENSIVE ANALYTICAL RECORD OF PROGRESSIVE MEDICINE AND SURGERY;

EQUALLY ADAPTED TO ALL RANKS OF THE PROFESSION.

CONDUCTED BY

ASSOCIATED PHYSICIANS AND SURGEONS;

AND SUPERINTENDED BY

JAMES JOHNSON, M. D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

(*ANALYTICAL SERIES.*)

VOLUME II.—for 1821-2.

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

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1823.

PREFACE TO VOLUME II.

ANOTHER year has rolled away—another volume has completed its orbit—and still the horizon of the Journal's circulation ceases not to extend. This, however, has been the *asserted* condition of *all journals*, at all periods—whether in their infancy, acme, or decline. It will hardly be contended that we have not exhibited some authentic proofs, in our list of subscribers, that the prosperity of the work was regularly progressive.* Nor do we lay claim to any other merit than that of industry, common sense, and good intentions—ceding, without reserve, the palm of talent, genius, and erudition to each and every of our cotemporaries; satisfied as we are that, for the humble attributes above mentioned, there is ample scope for exertion, and perhaps some reward in store.

The object of this Journal, professed at first, and inflexibly pursued afterward, is that of more equally balancing professional information among the different gradations of medical society through the medium of an ANALYTICAL REVIEW, which, rejecting all acerbity of criticism, directs its whole strength towards the selection and concentration of what may prove *useful* in the daily walks of practice. This task, simple and easy as it may seem, is one of no trifling labour and difficulty. Besides the necessity of some tact and natural sagacity in discriminating the grain amid the chaff, there is necessary, in addition, a clearness of conception, a facility of expression, and a command of language—powers that cannot always be assumed, at will, with the critic's chair or censor's rod.

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* When the present Editor undertook the sole management of the Journal, on the 1st July, 1818, the sale was under 200. The quarterly return for No. VI. from Messrs. Burgess and Hill, on the 1st December, 1821, was 1375 numbers sold during the preceding quarter. For the truth of this statement the latter pledges his word of honour, and refers any gentleman to the books of the publishers for its correctness.

There is another object of this Journal, not less important perhaps in its results than the diffusion of knowledge.. It is that of gradually promoting harmony and liberality throughout the members of the profession, and suavity of expression among its public writers. On the list of those numerous causes which unfortunately operate but too powerfully in sowing the leaven of dissention in the medical world, must undoubtedly be placed that wanton severity of criticism, personal abuse, and effusion of private malevolence, which, at one time, disgraced the Journals and works of this country, and still continue to do so on both sides of the Atlantic. Every honourable mind must revolt against such conduct, and it is the duty as well as the interest of all ranks of the Profession to discourage whatever tends to loosen the bonds of medical society, lacerate private feelings, and give vent to the worst passions of the human heart.

In conclusion, we have to acknowledge that the patronage which this Journal has received is far beyond its real deserts—a proof that the Public has often taken the will for the deed, and rather held out a premium for future industry, than a reward for past services. Under the impression of this feeling, on our parts, it is not unreasonable to anticipate progressive improvement, especially when it is considered that no medical journal ever before had the same inducement to persevere, or yielded the same recompense fo liter ary labour. We ran all the risk, and we reap all the pro fit—we commenced without assistance, and we continue without control—we had great labour in *establishing* the character of the Journal, we have deep interest in maintaining that character unblemished—our title-page is unemblazoned with Ancestral Escutcheons, any honours we acquire therefore must spring from our own industry—the Journal acknowledges but one patron, the Public ; it consequently has but one master to serve—one object to pursue. Under all these circumstances, our duty, inclination, and interest running in the same channel, the Public may be assured of undiminished exertion on our parts, and we shall calculate on the cheering influence of continued approbation from them.

Contents

OF

No. 8, Vol. II. for March, 1822.

ART. I.

ARACHNOID INFLAMMATION.

Researches on Inflammation of the Arachnoid Membrane, Cerebral and Spinal. By Drs. PARENT-DUCHATELET and MARTINET - - - - - - - - - 695

II.

Essay on the Fucus Helminthocorton, or Corsican Moss, in Cancer. By WILLIAM FARR - - - - - - 732

III.

A Series of Lectures on modern Surgery, principally from Sir Astley Cooper. By CHARLES MYNGAY SYDER - 736

IV.

Present State of Medicine in Italy, principally from the writings of TOMMASINI - - - - - - - - 745

V.

Observations on those Diseases of Females which are attended by Discharges. By CHARLES MANSFIELD CLARK - 757

VI.

Mr. STEVENSON on the Nature and treatment of Amaurosis 778

VII.

A Treatise on Diseases of the Chest, translated from the French of M. Laennec, by Dr. JOHN FORBES - - 795

VIII.

Mr. CHARLES BELL'S Experiments on the Respiratory Nerves 809

IX.

Mr. O'Halloran on the Yellow Fever of Andalusia, during the Epidemic of 1820 - - - - - - - - 817

X.

Mr. J. H. JAMES on the Principles, Nature, and Treatment of the different Species of Inflammation - - - 834

XI.

Mr. HENRY EARLE on the Re-establishment of a Canal in the Urethra - - - - - - - - - - 858

XII.

Dr. A. P. W. PHILIP on Indigestion, (*Second Edition*) - 862

XIII.

Medico-Chirurgical Transactions, Vol. XI. Part 2 - - 865

ART. 1. Mr. HUTCHISON on Bronchocele - - - 866

—— 2. Dr. GREGORY on Marasmus - - - - 868

—— 3. Mr. COATES on Fractured Pelvis - - - 870

—— 4. Mr. PRICE'S Case of Sudden Death - - *ib.*

—— 5. Mr. COATES'S Case of Aneurism - - - *ib.*

—— 6. Dr. GREGORY'S Case of Malformation - - 871

——7. ——— Case of Chorea - - -

ART. 8. Mr. BRETON on Pomegranate Bark . - 872
—— 9. ———— on Swietenia Febrifuga - - *ib.*
——10. Mr. SWAN on the Ear - - - - - 873
——11. Mr. DUNN on Amputation - - - - *ib.*
——12. Sir ASTLEY COOPER on Extraction of Calculi by a new Instrument - - - - 874
——13. Mr. WILBANK on Sloughing Phagedena - - 875
——14. Mr. BURMESTER'S Case of Tetanus - - 876
——15. Mr. SCOTT'S Case of Parturition, with separation of the Os Uteri - - - - *ib.*
——16. Mr. SALMON'S Case of Aneurism - - - *ib.*
——17. Mr. MARTINEAU on Lithotomy - - - 877
——18. Mr. PORTER on Cynanche Laryngea - - 878
——19. Sir ASTLEY COOPER'S Case of Tumour - - 880

XIV.

Opiologia; or Confessions of Opium-Eaters, with Practical Remarks on Opium - - - - - - - 881

XV.

M. FALLOT on Hydrocephalus - - - - - 902

XVI.

Medical Intelligence - - - - - - - - 904

XVII.

Correspondence - - - - - - - - - 905

XVIII.

Extra Limites.—Dr. EMERSON'S Medical Botany - - 906

XIX.

Bibliographical Record - - - - - - - 907

Contents

OF

No. 5, Vol. II. for JUNE, 1821.

I. Page

On Affections of the Mucous Membrane of the Digestive Organs; by Drs. Broussais, Abercrombie, Mekel, and Grimaud - - - - - - - - - - - - - - - - - 1

II.

Dr. Osborn's Sketch of the Physiology and Pathology of the Urine - - - - - - - - - - - - - - - - - - 41

III.

Dr. Conquest's Outlines of Midwifery - - - - - - - - 47

IV.

Messrs. Dalbant, Vaidy, and others, on Arterial Inflammation 50

V.

Mr. Swan, Dr. Kerrison, and Mr. Villers, on Affections of the Nerves - - - - - - - - - - - - - - - - 63

VI.

Mr. James Boyle on Indian Cholera - - - - - - - - 85

VII.

Dr. Prout on the Nature and Treatment of Gravel, Calculus, &c. - - - - - - - - - - - - - - - - - - 89

VIII.

Mr. Travers on Diseases of the Eye, and their Treatment 105

IX.

Dr. Whitlock Nicholl's General Elements of Pathology 133

X.

Dr. Ramsbotham's Practical Observations in Midwifery - 141

XI.

Dr. Weatherhead on the Waters of Leamington - - - 153

XII.

Mr. Charles Thomas Haden's Practical Observations on the Colchicum Autumnale - - - - - - - - - - - 155

XIII.

MILITARY SURGERY.

1. Mr. Guthrie on Gunshot Wounds, &c. - - - - - -
2. Dr. Hennen on Military Surgery - - - - - - } 165
3. Messrs. Laurent and Percy on Gunshot Wounds -

XIV.

Mr. H. Sandwith on the Epidemic Fever of Bridlington and Vicinity - - - - - - - - - - - - - - - - - 203

XV.

Biographical Sketch of the late Dr. James Gregory, of Edinburgh - - - - - - - - - - - - - - - - - - 216

XVI.

MISCELLANEOUS INTELLIGENCE.

1. New College in Kentucky - - - - - - - - - - 219
2. Ventriloquism - - - - - - - - - - - - - - *ib.*
3. Preparation of Opium - - - - - - - - - - - *ib.*
4. Hunterian Oration - - - - - - - - - - - - 220
5. Notice of an Extra Limites Department - - - - - 221

XVII.

EXTRA LIMITES.

Argus.—No. 1. On Medical Conduct - - - - - - - 222
Ditto—No. 2. Obstinate Pervigilium - - - - - - - 224
Ditto—No. 3. The Surreptitious Knight; or, Sir Charlatan Glanderman - - - - - - - - - - - } 224
Correspondence—Junius—Philo-Criticus—Scriblomania - 228
Bibliographical Record - - - - - - - - - - - 230
Notices, &c. &c. &c. - - - - - - - - - - - - 235

On the first July will be published, Third Edition, greatly enlarged and improved, "The Influence of Tropical Climates on European Constitutions." By James Johnson, M. D.

THE

Medico-Chirurgical Review,

AND

JOURNAL OF MEDICAL SCIENCE.

(Analytical Series.)

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

VOL. II.] JUNE 1, 1821. [No. 5.

I.

AFFECTIONS

OF THE

MUCOUS MEMBRANE OF THE DIGESTIVE ORGANS.

1. *Histoire des Phlegmasies, ou Inflammations Chroniques. Vol.* II. *De L'inflammation de la Membrane Muqueuse des Vois Digestives.* Par F. J. V. BROUSSAIS.

2. *Researches on the Pathology of the Intestinal Canal. On the Diseases of the Mucous Membranes.* By JOHN ABERCROMBIE, M.D. [*Ed. Journal*, 84.]

3. *Sur la Structure de la Membrane Muqueuse des Intestines dans l'Homme et dans quelques Animaux.* Par M. MEKEL, Professeur à l'Université de Halle. [*Journal Complimentaire, Septembre*, 1820.]

4. *Sur les Phlegmasies Folliculaires.* Par le Docteur AIME GRIMAUD. [*Journal Complimentaire, Decembre*, 1820.]

"Inflammatio quidem, ubicunque sit, non sine periculo habenda; periculosior tamen, ubi membranaceas occupaverit partes, ob exquisitum, quo pollent, sensum ac concensum gravissima et funesta simul symptomata adsociantur." *Hoffmani Opera, Tom.* III. *p.* 223.

IN the second number of this Series, we took up the subject of the *serous*, or peritoneal coverings of the intestines and abdominal organs generally—in the third number, the *mucous* membrane of the lungs—and in each, we endea-

voured to convey, as far as possible, to our brethren in this country, the opinions and observations of M. Broussais, one of the most celebrated pathologists on the Continent. It is, however, on affections of the mucous membrane of the *digestive organs* that M. Broussais has most distinguished himself; and this consideration, together with the great importance of the subject, will lead us into a pretty extensive analysis of the second volume of this illustrious foreigner, while we shall, at the same time, endeavour to collect and concentrate as much valuable information as possible, from other authentic sources, on the portion of pathology now under investigation.*

M. Broussais justly observes, that, when we consider the number and variety of extraneous substances, more or less stimulant, which are constantly traversing the mucous membrane of the digestive organs, it is really wonderful that we have not more frequently the phenomena of inflammation produced there. But, if we reflect on the exquisite sensibility of many portions of this membrane, and the numerous sympathies which subsist between it and almost every other part of the frame, we shall be convinced that, although actual inflammation is less frequent here than in the mucous membrane of the lungs, yet, that the morbid phenomena resulting from *irritation* in the primæ viæ, are infinitely more numerous and distressing than all the rest of the catalogue of human diseases collectively. We have, says M. Broussais, continually before our eyes, whole crowds of people who spend their time in tormenting the stomach with every thing burning and irritating which the animal and vegetable kingdoms can produce; and our books of pathology are filled with discussions of gastric and bilious derangements. If a drunkard dies of inanition, from defect of digestion, we are told of the loss of tone, or induration of the fibres of the stomach:—If he becomes dropsical—or dysenteric—the same explanation. Yet if we examine the symptoms exhibited by this class of patients, we shall find them correspond

* The critical expositions of M. Broussais's doctrines which have been drawn up in France, and republished in England, convey little or no idea of the valuable facts and observations on which those doctrines are founded. They are shadowy unsubstantial outlines magnified by generalities, but devoid of all useful and tangible particulars. Like criticisms in general, they have separated the grain from the chaff—leaving the grain behind. On coming to the examination of M. Broussais's work after perusing these *exposés* we found ourselves utter strangers to the real nature and true value of the publication. We are much mistaken if most of our readers are not in the same predicament.

exactly with what Pinel, in his *Nosographie Philosophique*, has laid down as characterizing chronic inflammation of the stomach and bowels.

Of the four phenomena exhibited in the living body, during inflammation, two only can leave traces in the dead—these are, *redness* and *swelling*—ulceration being a consequence of these. Whenever M. Broussais discovered these traces in the mucous membrane of the stomach, *post mortem*, he made diligent inquiries whether the other two phenomena, *heat* and *pain*, had been present during life. In a great majority of instances this was found to be the case; but when it was doubtful, Broussais examined very strictly, other patients similarly affected with those who died, and he constantly observed proofs of a morbid increase of sensibility in those tissues which, on dissection, showed redness and tumefaction. Here then were three of the phenomena of inflammation unequivocal; and as to the fourth—*heat*—it is not easy to ascertain its presence in *chronic* inflammations. It was, however, evidently developed when any irritating substances were taken internally.

Thus, then, M. Broussais adds, the signs of phlogosis of the internal surface of the stomach are, 1mo during life, certain lesions of function referrible to a surplus or morbid sensibility of the mucous membrane—2^{ndo} On dissection, redness and ulceration of this tissue.

M. Broussais is well aware, indeed, that many physicians will refuse the name of inflammation to the above-mentioned redness of the membrane—unless it is arrived at a high degree of intensity, and accompanied by pyrexia. To these objections he replies by an ample presentation of facts, in which the links that unite the most evident with the most obscure gastric phlegmasiæ may, he thinks, be readily recognised. Our author then details the histories and dissections of twenty-seven cases, occupying between sixty and seventy pages of the second volume, before he enters on the regular description, etiology, pathology, and treatment of the disease. We shall follow an inverse order;—first presenting an analysis of the didactic and descriptive part, and then selecting a few examples in elucidation of principles embraced or assumed.

I. Etiology. A phlogosed state of the mucous membrane of the digestive organs in general, is produced by whatever throws an undue degree of excitement on that tissue—principally by the impression of the atmosphere on the external, and aliments on the internal, surface of the body. Previous disease also may sometimes excite this affection. The eti-

ology differs somewhat according to the gastric or intestinal seat of the disease. Thus our author conceives that the *predisposing* causes of gastric phlogoses are such things as tend to accumulate the susceptibility or excitability of the tissue, whether by a *general* action on the system, or a *local* one on the organ itself. The *former* is exemplified by atmospheric heat—the *latter*, by the introduction of alimentary substances which have the property of keeping a greater degree of action or excitement in the stomach than is consistent with the general harmony of the system.

In respect to those predisposing causes which act on the system generally, M. Broussais makes several important observations on the heat and electricity of the atmosphere. The *former* of these agents renders more excitable the living fibre, and under high temperature reaction is more energetic than in low. When high temperature, however, is long-continued, or very great in degree, the excitability loses in power by exhaustion. Hence, old residents in tropical and other hot climates have a more languid circulation, and less reaction, in acute diseases, than the inhabitants of hyperborean latitudes. Our author believes, that, although the stimulus of atmospheric heat on the skin causes an increased secretion from that extensive surface, and consequently draws an over-proportion of fluids towards the periphery, yet that the irritability of the mucous membrane of the primæ viæ is, at the same time, increased, and rendered more liable to take on inflammatory action, when stimulants or irritants are improperly applied. M. Broussais admits that, under these circumstances, there is a corresponding increase of the biliary secretion—but considers it as the *effect*, and not the cause of irritation in the mucous membrane—"et la surabondance de la secretion bilieuse, autre *effet* necessaire de l'irritation de la muqueuse." We look on the phenomenon in quite another light—we consider the increased secretion of bile as the effect of increased stimulation on the surface—and the irritation in the primæ viæ as often the effect of this redundant and vitiated biliary secretion. We are glad to find the *fact* (however explained) confirmed by the testimony of a Broussais, who is equivalent to a score of closet sceptics among our fire-side travellers and practitioners of the present day.* Our author's

* Our intelligent readers need not be told that all extremes approximate, and that intense cold, and more especially alternations of cold and heat, by driving the blood occasionally from the surface to the interior organs, produce the same effect as intense heat, in disposing to visceral inflammation.

reasonings on the action of electricity in predisposing the mucous membranes to phlogosis, are not very clear to us, and therefore we shall not bewilder ourselves or our readers by noticing them.

The predisposing causes which act *directly* on the stomach and bowels, are, as we before said, the stimulating substances swallowed by the mouth, for whatever purposes. These may produce phlogosis of the mucous membrane, even without the aid of predisposition from atmospheric causes acting on the surface. The following passage may be perused with advantage by more than our colonial readers.

"If men would take care to diminish the stimulants which they swallow, in proportion to the increased excitability of the stomach produced by the atmospheric heat of our summers, or of tropical climates, until they became *acclimates*, they would assuredly escape inflammatory affections. But when they sit down to table, they forget the precepts of Hygiene. They will retrench nothing from their former habits of indulgence. They swallow the same quantities of meat, spices, wine, coffee, liqueurs, as though they lived in the frozen zone, or their stomachs were in an ordinary state of excitability. Nay, such is the force of prejudice, that they consider this regimen as necessary to resist the debilitating effects of the climate! If, after an incendiary repast of this kind, a devouring thirst is kindled up, they would, if possible, quench it with more wine and spirits; but happily Nature compels them to have recourse to simpler fluids—and thus the antidote is every day opposed to the poison." Tom. II. *page* 191.

Our author goes on to enumerate the long list of "dishes tortured from their native taste," and inebriating liquors which especially among the predisposed, lead, sooner or later, to inflammatory affections of the digestive apparatus. In this list he very properly includes also the farrago of stomachic tinctures, and quack medicines which the credulous and unwary are constantly pouring down their throats, for the *purpose* of relieving, but actually with the *effect* of aggravating the states of irritation prevailing in the chylopoietic organs. Among the predisposing causes also may be classed unpleasant emotions of the mind, especially grief.

It is almost needless to say, that these *predisposing* causes, if long continued, or excessive in degree, become *exciting* causes of the inflammatory state. What has been said of the predisposing and exciting causes of gastritis will apply, as nearly as possible, to enteritis. M. Broussais makes many acute observations on the effects of atmospheric impressions, and the reception of miasmal impregnations in the system, in the production of diarrhœal and systematic affections; but

his remarks are familiar to the English, who have long ago investigated these points. It may be proper to state, that M. Broussais considers dysentery as neither more nor less than inflammation of the mucous membrane of the intestines—and he makes an increased secretion of bile an occasional cause of the disease—an assertion that convinces us he never laboured under dysentery himself, or examined with care the stools of many dysenteric patients. Till within these few years an increased secretion of bile was considered the sole *cause* of cholera; but now it is pretty well proved, that it is a mere *effect*, and sometimes not at all present in the disease. In his etiology of irritation and phlogosis of the gastro-intestinal lining, M. Broussais includes almost every thing which we place in the etiology of fever, as the effluvia from crowded bodies of men, unhealthy food, depressing passions, great fatigue, poverty, &c. &c. This must be carefully borne in mind; for the reader is to recollect, that we are not exclusively on the subject of common unequivocal gastritis, especially as effecting the *peritoneal* covering of the organ, but on those irritated or phlogosed states of the *inner* surface of the digestive tube, accompanying (whether as cause or effect) a great portion of what are termed idiopathic fevers. The reader may not go the whole length of M. Broussais's doctrines; but it will be highly to his advantage to study with the profoundest attention, and divested of prejudice, the contents of this analysis. We shall now proceed to the developement of symptoms in these phlogoses of the mucous membrane of the digestive tube.

II. *Symptomatology of Gastritis.* The first premonitory symptom is generally a sense of heat in the region of the stomach, during gastric digestion—at first, of a rather agreeable kind, ceasing when the stomach is empty, and succeeded by a farther craving for food. After these prelusive phenomena have continued for some weeks, or even months, according to the intensity of the causes, the person begins to perceive that this sense of gastric heat becomes unpleasant, and is coupled with a sympathetic heat of the skin, which is dry and rough. The tongue becomes dry and hotter than natural, with slight sore throat, broken rest, nervous irritability, heat and pain in the head. Now commences a kind of aversion to animal food and fermented liquors—sometimes thirst. When the disease sets in unequivocally, after these premonitions, it exhibits two forms. determined, as it would seem, by temperament.

A. *Acute Gastritis of the Mucous Membrane.* The first

symptom is sometimes a violent vomiting, resembling cholera morbus. The patient throws up every thing that he swallows; then bilious, mucous, or even sanguineous looking matters; going very frequently to stool at the same time. Fever is a necessary accompaniment of this form of the disease. Sometimes gastritis declares itself without vomiting—but always with violent pyrexia, not preceded, in Broussais's experience, by a cold stage or shivering. The patient complains of a burning internal heat, and generally of a soreness in the pharynx. The tongue appears red and clean, or covered with mucus, except when the patient has been some time without drink. The thirst is considerable—the desire for cold acidulated drink is as great as the aversion for every other kind of liquid. If the phlogosis does not extend to the intestinal tube, there is constipation.—If it reach the colon, there is diarrhœa with tenesmus. There is deep-seated pain in the epigastric, and especially in the right hypochondriac region, but not exasperated without a certain degree of pressure. This pain is sometimes lancinating, and accompanied by a sense of constriction. It manifestly diminishes after the patient has swallowed cold aqueous drink, especially if acidulated. Very often the vomiting ceases, in a few days, although the other symptoms persist. At other times it continues or supervenes, in the course of the disease, and the patient is harassed with constant nausea, which appears to him to be occasioned by some globular body rising upwards, and painfully compressing the lower part of the chest. Each fit of vomiting is followed by a temporary ease, of very short duration, the patient incessantly demanding emetics—a symptom still more common in peritoneal inflammation than in acute gastritis. The absolute impossibility, which the patient supposes, of swallowing any thing, appears referrible to the contracted and highly irritable state of the upper orifice of the stomach. Such are the principal symptoms in acute gastritis; but several of them may be absent—even pain itself does not exist, in some cases, where the inflammation is most intense. Our diagnosis must therefore be assisted by a rigid observance of the *sympathetic* troubles produced by this phlogosed state of the mucous membranes of the digestive organs. The *first* class of these appertains to the head, affecting the functions of the senses, and the movements of the voluntary muscles. Headach may or may not exist. Aberrations of the intellect, corresponding with the moments of greatest suffering, are more steady in their appearance.

"I have seen," says our author, "men as completely delirious as in fevers the most malignant, or phrenitis itself."

In such cases too, we often see the conjunctiva red, the eye inflamed, and the features altered. In proportion as the disease advances, and the sufferings increase, the attention becomes estranged, till coma ensues. In the meantime we observe irregular contractions of the facial muscles, grinding of the teeth, subsultus tendinum, and various convulsive movements. The patients throw off the bed-clothes, when they are sensible, complaining that the internal heat which devours them is ten times more insupportable when the chest is covered. They try all kinds of positions in bed; sigh deeply; and show in their countenances the expression of intense agony. If they are questioned respecting the nature and seat of their pains, they apply the hand to the epigastric region, but cannot clearly describe their sufferings—the sense of internal burning is the only one which is distinct to them. We must therefore ground our diagnosis on the tout ensemble of the symptoms, and especially on the instantaneous relief produced by cooling drink. The muscular force is not *exhausted* in these cases, for the strength is quickly recruited after a crisis—which is not the case in those malignant and typhous fevers resulting from deleterious miasms.

In respect to the *respiratory system*, we observe sometimes a cough, with teazing pain; a glairy or mucous expectoration streaked with blood, or white, like that of peripneumony, at the period of resolution; a general pain in the chest; a laborious respiration in sanguineous subjects. The voice is often lost from a sympathetic paralysis of the laryngeal muscles.

During the first days of acute gastritis the pulse is full, hard, and often as strong as in pneumonia, particularly if the pectoral symptoms above-mentioned are present—a proof of sanguineous plethora in the pulmonary parenchyma. In lighter shades of gastritis, and when the vital powers have been reduced by pain, the pulse is sharp, irregular, or even intermittent—towards the close of life imperceptible. Heat of skin is considerable, during the violence of the acute stage. M. Broussais has always found it dry and harsh. The skin is cold when the disease is on the decline—and cannot be brought to a natural warmth when the disease is verging to a chronic state. The cutaneous secretions are suppressed; and the breath is fetid in a few days after the circulation becomes much increased.

B. *Chronic Gastritis.* This may be a primitive affection, or the sequela of an acute attack. It is produced by the same causes as acute gastritis; but from peculiarity of con-

stitution, or force of cause, it is unaccompanied by those violent commotions in the system which arrest the attention in the other species.

"The patient complains of pain across the base of the chest, deep-seated in the epigrastric and hypochondriac regions—generally more considerable in the right side, and sometimes so high up as to be thought in the chest. This pain is constant and very troublesome —sometimes burning, lancinating, pricking, and confined to a very circumscribed spot, especially when the stomach contains any acrid or irritating substances. It is very frequently accompanied by a sense of constriction. Some patients complain of feeling as though a ball of large size were pressing against the diaphragm—others as if a bar were fixed across the stomach, preventing their swallowing food or drink. Of all these sensations the lancinating and stinging pains are those which acquire the greatest degree of intensity. The others are so faint that the patient seldom demands relief from them till the strength becomes considerably reduced." 214.

The appetite always fails, and when the disease exists in its greatest degree, there is a general abhorrence of food. When there is any remains of appetite, the digestion is quite imperfect. Aliments are usually thrown up soon after eating—especially if too much food, or food of a stimulating nature, have been swallowed. Those who, from a milder degree of the disease, or idiosyncrasy of stomach, do not vomit, are oppressed, during the gastric digestion, with a sense of load at the stomach, nausea, acid, corrosive or fetid eructations, rumination, and exasperation of the usual pain. There are some patients who only experience eructations, inquietude, malaise, and mental perturbation. The pulse rises a little, and the skin warms, during gastric digestion, but sink to their usual level when the digestive process is finished. For a considerable time the bowels are as costive, as though a scirrhus of the pylorus existed; but ultimately, in the majority of cases, there is diarrhœa, with colic, tenesmus, and stools mixed with blood—a proof of the extension of the disease. Then the breath and even the perspiration exhale an odour manifestly steroraceous.

These sufferings, even when not very severe, are badly borne by the sick, who become dejected, impatient, taciturn, discontented, and not disposed to enter into the details of their ailings. They have an air of suffering in their countenance; the conjunctiva, lips, and cheeks, being of a deep red colour, verging towards that of tincture of logwood, as are also the tongue and whole interior of the mouth, excepting along the centre of the former, where a thin mucous list may be seen. In a few subjects M. Broussais has observed, the tongue very much loaded, the breath offensive, and a

bitter taste in the mouth—but these are exceptions, and the diagnosis must be drawn from the *tout-ensemble* of the symptoms, not from any one class exclusively.

As soon as chronic gastritis is completely established, the cellular and adipose membrane becomes nearly absorbed, with but little diminution of the muscles; when these last are much extenuated, the disease is without hope. At all times, however, the skin is drawn tight over the muscles, sinking in in their interstices, so that it cannot be pinched up but with difficulty, even in those places where it is usually very relaxed. In no other species of marasmus has M. Broussais seen this degree of adhesion so strongly marked. This character of the skin, together with its colour, being a brown, inclining to yellow, offer two of the most constant diagnostic signs of chronic gastritis.

The pulmonary system suffers very little in this species of the disease, with the exception of a slight stomach-cough occasionally. Nor is the circulation so much influenced at the beginning as to evince any appreciable febrile movement. When the disease has made progress, then the pulse becomes hard and frequent; the skin, at the same time, being hot, and dry to the touch. There is always an evening exacerbation, with agitation and restlessness. If this train continues unchecked, prostration of strength soon ensues, and the gastritis, in fact, passes into the acute form. If, however, the febrile movement is only marked by frequency of pulse, without heat of skin—or if the patient only experiences a few hours of heat towards the evening, or during digestion, the malady may continue chronic. In all cases, if long protracted, the febrile symptoms subside—and the evening exacerbation ceases to be sensible. Then the skin becomes cold, and of the colour before described, with perceptible wasting of the body. When diarrhœa is added, the cessation of pyrexial phenomena is still more sudden and complete.

III. *Phlogosis of the Mucous Membrane of the Intestines, or Dysentery.* M. Broussais observes, that we rarely find in the bodies of those patients who have died with diarrhœa, any signs of phlogosis of the internal surface of the small intestines. Such inflammation is usually found in connexion with gastritis—indeed, where the mucous membrane of the small intestines is found inflamed at all, there is generally inflammation throughout the whole canal, from the cardiac orifice of the stomach to the anus. M. B. in this section, speaks only of inflammation as affecting the colon, which he divides into acute and chronic, though he seems to

feel, that the shades so blend into one another occasionally, as not to be distinguished but in well-marked cases.

A. *Acute Species.* In this case there are few premonitory symptoms, especially if the disease be very acute. In its highest degree, it is, according to M. Broussais, DYSENTERY. In our author's symptomatology, there are suspicious passages—as, for instance, his mentioning the discharge, at first, of *fœcal* stools, and afterward of *bilious* ones. Such occurrences we have not observed in one case in fifty, and we have seen more than two thousand cases of dysentery. We can allow, however, for these inaccuracies—or perhaps M. Broussais's patients were differently situated from those of our countrymen here, or in the colonies.

The phlogosis of the colon, M. Broussais has seen terminate in gangrene, in the course of a few days, without any other mark of fever than a certain precipitation in the pulse, without any heat of skin. If the patient be vigorous, plethoric, or irritable, the febrile heat is strongly developed, after rigours more or less apparent from the beginning. Then the dysentery is acute and febrile, like the acute gastritis before described. The symptoms of acute dysentery need not be detailed—nor does our author enter into the consideration of complications of this disease with continued fever.

B. *Chronic Colonitis.* 1mo Chronic *secondary* diarrhœas are not uncommon symptoms, sometimes a sequel of acute dysentery, and too often, in such cases, the consequence of mal-treatment. Most of these secondary bowel complaints have, at one period or other, symptoms in common with dysentery, as bloody stools, tenesmus, and some febrile movements in the system. 2ndo *Primitive* chronic diarrhœa. A man, apparently well, becomes affected with bowel complaint, which sets in without fever or pain, and lasts a longer or shorter time, exhausting his strength and flesh, yet without causing any considerable disorder in the harmony of the other functions. This diarrhœa is, like the preceding, the effect of phlogosis in the mucous membrane of the large intestines. It is the lowest grade of chronicity in the disease under consideration, and one which it is important to mark, as being allied with grades where phlogosis is unequivocal. It corresponds with the chronic gastritis already described.

M. Broussais saw a number of people in Italy attacked with diarrhœa, without any other appreciable cause than the influence of climate, and food of an irritating nature, or of difficult digestion. It was accompanied by no other inconvenience than slight colicky pains preceding each dejection. These people continued to attend to their usual avocations.

for some weeks, till the debility and the harassing frequency of stools compelled them to give up. As long as the patient continued his usual occupation and regimen, so long the disease continued;—and in such cases it was often protracted for six months. But, by degrees, it exhausted the patients. If they were of an irritable constitution—if they had constringing pains of the abdomen, with a contracted, quick pulse, they usually fell into marasmus. Or if they were of a more relaxed and leucophlegmatic habit, (which is often the case in these people) they became dropsical, and died with or without coma, according as effusion did or did not take place within the coverings or cavities of the brain.

"In fine," says our author, "when the irritating causes exalt all at once, the action of the gastro-intestinal mucous membranes so far that pain shall suspend their functions and disturb the harmony of their movements—that is to say, when the gastric or intestinal irritation shall become suddenly so powerful as to cause local pain, vomiting, or diarrhœa, and fever—we have *acute inflammation* of the mucous membranes. When, on the other hand, these irritating causes exist for some time, without producing more than such a moderate excitement as shall only suspend the gastric functions for a short time, and feebly call forth the play of the sympathies, without greatly disturbing the general harmonies of the system—then we have *chronic phlogosis* of the same structures." *Tom.* II. *p.* 228.

IV. *Organic Changes.* Every phlogosis of the mucous membrane of the digestive organs, which proves fatal, during its acute stage or state, presents, *post mortem*, the tissue thickened, dense, reddened in different degrees, and sometimes exhibiting the characters of ecchymosis, or even gangrene. The membrane is sometimes found eroded, or, as it were, gnawed in small isolated spots;—and, finally, covered or not, with an exudation of various consistence and character. The change of *colour* from rose red to violet, or even black, does not necessarily prove disorganization of *structure*.

"An attentive observation has convinced me, that patients have often died from the sole effects of *pain*, in early stages, and before the inflamed texture (trame enflammée) was broken, or sensibly altered in its composition. This is the fate of those unfortunates to whom cordials have been given, when overwhelmed with debility resulting from the nervous irritation and pain in such sensible structures. I have often resuscitated, with lemonade, men who were without pulse, delirious, and almost in the agonies of death. And those who have died in this state, frequently showed nothing more on dissection, than discoloration, without erosion or fœtor, of the mucous membrane."

Here M. Broussais very properly observes, that various

authentic histories prove how long the mucous membranes, both of the digestive and respiratory organs, will resist disorganization, when foreign bodies are lodged in contact with them, and keeping up great irritation and disorder of the whole system. Among a number of examples of this kind, related by M. Dumeril, we shall only select the case of a youth of twelve years of age, who, up to that period, had enjoyed perfect health. At this time he began evidently to emaciate, with frequent and dry cough, evening fever, morning sweats, and other symptoms indicative of consumption, which every day increased in severity. The patient seemed at his last goal, when one day he passed by stool the shell of a nut which he had swallowed twelve or fifteen months before. From that instant the symptoms began to abate, and the patient was soon restored to perfect health. This, and other cases of a similar nature, may lead us to hope for a cure, even in long-continued gastritis and enteritis. The above case may give some idea of the endless train of symptoms produced by irritating and morbid secretions passing along the sensible membrane of the bowels from day to day, and keeping up a deranged state of the whole constitution. It elucidates the effects of mild eccoprotic and alterative medicines, steadily persevered in, till the abdominal organs become sound and free in function, and the secretions of a mild and healthy nature.

Our author here supposes that people may object, by observing that patients will often complain of no pain in those parts that are phlogosed—not even when they are a prey to the most terrible anxiety, fever, convulsions, and delirium. But we would answer, that he must be a very bad physiologist as well as pathologist, who would expect that irritation or even breach of substance of an internal organ or tissue shall always exhibit the common feelings or sensations of an organ of sense, as the skin for example. No; these parts have their own organic sensibility, which may produce infinite disorder in the system, before the common sensibility, or feeling of pain be developed. Although pain, therefore, be a strong proof of disorder in an interior part, the absence of it is no proof to the contrary. We must always take various phenomena into consideration.

Those patients who had fallen a little later, after passing from a state of excitement to one of exhaustion, with symptoms of low, putrid fever, especially fœtor of the breath, have often presented, on dissection, the mucous membrane black, easily lacerable, and exhaling a gangrenous odour. This was by no means always the case, even when symptoms led to the expectation of it. Erosions only take place

partially, and in the portions most phlogosed. Apparently they are incipient ulcerations.

Fatal *chronic* gastrites have presented to our author disease of the mucous membrane differing somewhat from that produced by dysentery. In Italy he found the same morbid appearances after chronic, as after acute, gastritis—namely, discoloration, thickening, and sometimes erosions. He never saw unequivocal ulceration. The redness was not so deep in chronic as in acute disease—nor did the violet or black parts exhale the gangrenous odour. The thickening of the membrane was uniform. In almost all the dissections of chronic cases the digestive tube was found contracted, so as to contain scarce any excrementitious matters, its parietes being almost every where in contact. In very protracted cases the whole of the intestines were found wasted and shrunk, so as to occupy but a very small space indeed. Larrey makes the same remark; and Tartra found, in a patient who had been three months ill with gastritis, the intestines so reduced that they could be, as it were, held in his hand. The intestinal calibre did not exceed that of a quill, and in many places was almost completely obliterated. We have seen a few remarkable instances of this kind ourselves; but the peritoneal covering was also implicated in the disease, and the flexures of the intestines all glued together.

M. Broussais remarks that, notwithstanding what has been said, he sometimes found that considerable irritation had continued for two or three months in the mucous membrane, without leaving a single trace of its existence, *post mortem;* death having, apparently, taken place from that excessive debility resulting from the interruption of the digestive process by pain, together with the sympathetic disorder of various other functions of the system. When, however, chronic phlogosis of the mucous membrane was protracted to a much greater length of time, as for some years, which is not unfrequently the case, then there was a different result. Disorganization was evident, and generally consisted in a thickening of the stomach, for several inches in extent, involving the three coats in one confused and morbid structure.

Chronic dysentery always leaves, *post mortem*, a greater or less degree of thickening in the mucous membrane, and generally a number of ulcerations, resembling those of syphilis; the mucous membrane in those places being entirely destroyed, and the muscular coat of the intestine always forming the floor of the ulcer.

A minute examination of such of these ulcers as were in an incipient stage, convinced M. Broussais that they took

their origins in the crypts or glandules that furnish the mucous secretions. Around them the membrane was thicker than elsewhere, and of a blackish colour. These ulcerations were most numerous where the fæces are apt to lodge, as the cœcum and lower half of the colon. In some instances, M. Broussais has observed these ulcerations in the lower portion of the ileum, but never elsewhere. M. Broussais concludes, (and there can be little doubt of the justness of his conclusion,) that when feculent matters become fetid and putrid, whether from protracted remora, or imperfect digestion, they prove a source of irritation, and ultimately of phlogosis in that part of the mucous membrane where they happen most to lodge. It is also evident that, when irritation is present in the mucous membrane of the bowels, a greater quantity than usual of mucus is secreted, and this is a characteristic of the class of complaints under consideration. When ulceration of the mucous membrane has taken place, M. Broussais considers the disease as incurable, or nearly so. They do not exist in the stomach or small intestines. There is no sign by which we can ascertain their existence in the large intestines during life.

V. Before entering on M. Broussais's methodus medendi, we shall here introduce an outline of Dr. Abercombie's opinions on affections of this class of mucous membranes. Viewing the internal coat of the intestinal canal in the double light of a secreting membrane and an absorbing surface, he justly considers that disordered function of secretion must derange the process of absorption, and this latter disorder will have, of course, a great and deleterious effect on the whole constitution, by cutting off the supply of the system.

The morbid conditions of this membrane he refers to acute or chronic inflammation, and their sequelæ, thickening, erosion, and ulceration. As the incipient movements of inflammation here are seldom observed, diarrhœa is generally the first symptom that comes under our cognizance in practice, accompanied by pain in the abdomen, more or less diffused, and usually increased by pressure, but without that acute sensibility attendant on inflammations of the peritoneal covering.

"It differs from peritoneal inflammation also in being less affected by inspiration and by motion, so that the patient can often bear the erect posture with little inconvenience. The pain, in general, varies very much in degree, leaving long intervals of ease, and then occurring in paroxysms of violent tormina; these are generally followed by discharge from the bowels, but may take place without any discharge following them. In some cases, however, the pain is

more permanent, so as more nearly to resemble the pain of enteritis. In general, there is frequency of pulse, with thirst, febrile oppression, and a brownish fur on the tongue; but, in some cases, the pulse is little above the natural standard through the whole course of the disease. There is frequently vomiting, but not urgent, and sometimes a peculiar irritability of the stomach, so that any thing taken into it excites a burning uneasiness, and this is usually followed by an irritation of the bowels, with a feeling as if the article which was swallowed almost immediately passed through them.

"The evacuations from the bowels vary very much both in appearance and frequency. In some cases they are slimy and in small quantity; in others, they are copious; sometimes they are watery and dark coloured; sometimes whitish; frequently yellow and feculent, as in a common diarrhœa; and sometimes articles of food or drink pass through nearly unchanged. They are in some cases extremely frequent, the patient being called to stool every ten or fifteen minutes; in others, the disease may be going on rapidly to a fatal termination, while the bowels are not moved above three or four times in the day. No diagnosis of the disease, therefore, can be founded either on the frequency of the evacuations, or on the appearance of the matters evacuated. In some cases there is tension of the abdomen, but in others this is wanting; and it may appear and disappear several times in the course of the same case." *Ed. Journ. p.* 322.

In this way it may go on for one or two weeks, or extend to five or six—or pass into a chronic state, forming a disease analogous to what is termed lientery, wearing the patient out at the end of several months.

Its fatal terminations, in the acute state, are, according to our author, a peculiar rapid exhaustion—or conversion into peritonitis or enteritis, in which case, the diarrhœa usually ceases a few days before death. Dr. A. lays down little satisfactory as to diagnosis or etiology. We shall here introduce an extract relative to the appearances on dissection, by which it will be seen that Dr. Abercrombie has been anticipated in all essential points, by the French pathologist. The corroboration afforded by Dr. A. however, is satisfactory.

"The appearances, on dissection, vary considerably, according to the period of the disease at which the fatal event takes place. When this happens at an early period, we find the mucous membrane covered with irregular patches of inflammation, which are, in general, sensibly elevated above the level of the sound parts. They vary exceedingly in extent in different cases, in some extending over a great part of the canal; in others, being confined to a very small portion of it, frequently about the lower end of the ileum, or the head of the colon. They vary also in size, consisting, most commonly, of patches one or two inches in diameter, with sound portions interposed betwixt them. above which they are sensibly ele-

vated. In other cases, but I think less frequently, a considerable extent of the canal is of a continued uniform redness.

"The inflamed portions are in some cases covered by a brownish tenacious mucus; in others, by coagulable lymph, and frequently the surface of them is studded with minute vesicles, which at a more advanced period, seem to pass into very small ulcers. In other cases small round portions of the membrane are observed of a gray colour and soft pultaceous appearance, are found to be easily separated, and to leave ulcers. In the cases which have gone on to a more advanced period, we find ulcers of various extent and appearance. In some examples, they are of the same colour with the surrounding parts, and merely appear as if a portion of the membrane had been dissected out. In other cases they are more decidedly ulcers, covered at the bottom with yellowish sloughs, often with elevated edges, and surrounded by a ring of inflammation, and sometimes penetrating to such a depth as completely to perforate the intestine. These different appearances seem to be different stages of the same disease; for we may sometimes observe one of these penetrating ulcers, surrounded by a large circle of abrasion, without evident ulceration, and this by another ring of inflammation; this outer inflamed portion being probably covered by the very minute ulcers or small vesicles formerly mentioned. The appearances which I have now described seem to be the most common; but cases occur in which an extensive portion of the mucous membrane is black and gangrenous, and sometimes an extensive portion has been found to be separated, so as to expose the muscular coat, or even the peritoneal. Cases are also described which have recovered, after a portion of the internal coat had been thrown off in this manner, in one continued cylinder of great extent. The external surface of the intestine is sometimes healthy; in other cases there are spots of obscure redness corresponding to the inflamed portions of the mucous membrane. The cases which terminate by peritoneal inflammation or enteritis, have the appearances usual in these affections, and in the cases in which the ulcers penetrate the intestine, effusion of coagulable lymph, lividity, or gangrene, to a small extent, may often be observed on the outer surface, surrounding the perforations." 324.

Dr. A. thinks that acute inflammation of the abdominal mucous membranes is a frequent disease of infants about the age of six or eight months, being with difficulty distinguished from the common bowel complaints of children, resulting from the constitutional irritation of dentition. There is pyrexia, with fretfulness and screaming, bad sleep, frequently vomiting, pressure on the abdomen, in many cases, giving pain. The disease often assumes the character of what is termed "the infantile remittent fever." The bowels are generally, not always, loose, the evacuations being preceded by much restlessness and apparent uneasiness, and being very various in colour, odour, consistence, &c. Sometimes they consist of a reddish brown mucus, sometimes of a pale

clay-coloured matter, sometimes of a dark watery fluid, and at others, not varying materially from a healthy state. The disease is usually mistaken for a common diarrhœa, until strong constitutional symptoms, as great febrile oppression, dry crusted tongue, thirst, vomiting, or a rapid exhaustion, of the vital powers, excite the attention and anxiety of parent and practitioner. *Dissection*, in these cases, usually shows irregular patches of inflammation in various parts of the inner surface of the intestines, especially the ileum, often covered with minute vesicles or ulcerations. In cases terminating with coma, effusion in the brain is found often preceded by a remarkable paucity of urine.

Of the *chronic* form of mucous inflammation, in general, Dr. Abercrombie does not say much. He thinks it may be a sequela of the *acute* disease, or an idiopathic affection. When it has continued for some time, we find the patient withered and emaciated, generally with diarrhœa, either constant or alternating with a constipated state of bowels, the appetite being variable and capricious, sometimes good or even voracious. The food often produces uneasiness until it is evacuated imperfectly digested.

If by opiates or astringents the diarrhœa be restrained, the gastric uneasiness is generally much increased, and vomiting is sometimes excited. In other cases, vomiting regularly alternates with diarrhœa, the remedies that relieve the one aggravating the other. The abdominal pain, though generally existing, is various in character, being sometimes in the shape of tormina preceding the evacuations—in others, more permanent and increased by pressure. The matters evacuated are very various—sometimes fluid and feculent—frequently white—and sometimes a mixture of half-digested articles, with recent bile, or brownish mucus, the production of the diseased surface. "In some cases there are discharges of venous blood, which may either appear in the form of coagula, or as a dark pitchy matter, giving a dark colour to the whole of the matter discharged. The *autopsial* observations of our author, on the chronic form of the disease differ, in some respects, from those of M. Broussais, and therefore, we shall introduce a quotation from the former in this place.

"The appearances on dissection show the disease in various stages. In some cases, even after the symptoms have existed for a considerable time, we still find it in the form of irregular patches of a fungous appearance, and a dark red colour, slightly elevated above the healthy parts. In others, we find distinct small ulcers, with round elevated edges, and sometimes more extensive irregular ulceration, with ragged edges. Frequently the coats of the in-

testines are thickened at the ulcerated parts, sometimes to such a degree as considerably to diminish the area of the intestine. In such cases, the ordinary symptoms of the disease are apt to alternate with attacks of obstinate costiveness, and they are frequently fatal by ileus. In some cases, instead of ulceration, the inner surface of the diseased parts is studded with numerous tubercles, of various sizes, and sometimes an extensive tract of intestine is found covered with smooth cicatrices of ulcers, which have healed. In some of these cases, the symptoms have continued, and gone on to their fatal termination in the usual manner. In others, this appearance is found after the symptoms have ceased, and the patient has died of some other disease. Cases have also occurred in which the patients died of emaciation, after the symptoms had ceased, apparently from these cicatrices being so extensive as to interfere with the process of absorption." 328.

Dr. Abercrombie justly observes, that there is great reason to believe, that the class of disorders under consideration exists in a degree short of actual inflammation, but sufficient to produce a host of those anomalous affections of the *chylopoietic organs* which, of late, have forced themselves on the attention of various physicians and surgeons. Indeed we are firmly persuaded that, to irritation of the mucous membrane of the stomach and bowels, together with the various sympathetic disorders of other organs, the consequence of this irritation, are owing nine-tenths of human afflictions—and that the more this subject is studied, the more power will we have over diseases which have generally proved obstinate or intractable. It was from this conviction that we brought forward the present article, and hope it will not fail to excite to farther investigation.

VI. *Treatment.* M. Broussais thinks he may hazard one fundamental rule, in the treatment, which is without exceptions—namely, that when the internal surface of the alimentary canal is phlogosed—that is, when its sensibility and temperature are exalted—its texture tumefied, and its nerves in pain, it cannot bear, with impunity, the application of irritating substances—on the contrary, our prime curative indication is to bring into contact with it, matters the reverse of stimulant. The upper and lower portions of this canal, that is, the stomach and intestines, are somewhat differently acted on by the same substances, and therefore require to be considered separately.

A. *Treatment of Gastritis in general.* M. Broussais thinks that this is simple and easy. This inflammation requires 1^mo^ TIME to subside before aliments are introduced into the stomach—2^ndo^ medicines to facilitate the favourable

termination of the disease. The *first* precept or rule is to be most rigidly observed. Meat, the farinaceæ, and fruit ought to be prohibited in gastritis. The best drink is a very dilute solution of gum tragacanth, which is less irritating than gum arabic, the extractive or colouring matter of the latter being somewhat stimulant. While we forbid the use of aliment, or drink of an alimentary nature, so that the stomach may be at rest till the phlogosis is resolved, this resolution may be accelerated by blood-letting, sedative, topical, and other external applications. *General* blood-letting, our author thinks, will seldom be of service—excepting in very acute forms of the disease, when the strength of the pulse, the dyspnœa, or the sympathetic cough, unequivocally demand that measure. Local bleeding, especially by leeches placed over the epigastrium, is of more certain benefit. Yet even this is only an auxiliary, and gives but temporary relief if unaided by internal emollients and sedatives. Of the internal sedatives the vegetable mucilages and acids are by far the best. The *former* must be simple, pure, and free from extractive or aroma, as linseed, althea, quince seeds, gum tragacanth, and others that are perfectly insipid. The decoctions, infusions, or solutions of these substances should be made, if possible, with distilled water, and be very dilute, otherwise they are apt soon to disgust the patient.

After the mucilaginous substances, the vegetable acids stand next in order of utility—but they must not be employed indiscriminately. The acetic acid does more harm than good. The lemon, of all fruits, furnishes the best acid for the drink of a patient labouring under gastric inflammation. After citric comes the pure tartaric acid; but it must be given extremely diluted. Orange juice diluted in water is beneficial, but the patient generally soon tires of it. The gooseberry and raspberry are better. The acid of the mulberry is too penetrating, and if employed, must be very largely diluted. The mineral acids are poisons in these cases. The vegetable acids above mentioned, are only to be employed so as to give a light and agreeable acidulous taste to the water or ptisans used for drink. Saccharine vegetable acids too are to be very sparingly given, as the sugar is slightly stimulant in itself, and, if not digested, runs into the spirituous fermentation. M. Broussais has not employed the carbonic acid, though he thinks it might be useful. Blisters to the region of the stomach do as much harm by their general excitement of the system, as they do good by their local revulsion. He thinks the same observation is applicable to all the other vesicatories or rubefacients. It

then, irritation of the skin generally propagates a sympathetic irritation to the internal coat of the stomach, we might expect that such applications to the surface as produced pleasing sensations there, would sooth the gastric affection. Experience, he says, corroborates this. The patient naturally craves for pure cool air, throws his arms out of the clothes, and bares the chest and epigastrium. He has found it extremely useful in this complaint to keep the surface over the stomach wet with cold, or at most, tepid evaporating lotions, by means of cloths. The application of ice, if the weather be hot, is serviceable, in many cases. "Let not," says our author, "practitioners despise these means last enumerated, as useless or superfluous. I have derived from them the greatest advantage. I have seen patients freed from pain and gastric malaise, almost instantaneously by the application of flannels, wrung out of emollient decoctions, to the epigastric region. The soothing of pain and the increase of perspiration generally resulted from this measure, and were of incalculable benefit." These observations apply to gastric inflammation in general; the different periods and varieties of the disease require corresponding modifications.

And here we solicit the patient and attentive consideration of our brethren. However we may undervalue the inert practice of our French cotemporaries, in acute diseases generally, we are convinced that their treatment is singularly judicious and appropriate in the peculiar class of the phlegmasiæ now under investigation—not only because the phlegmasiæ do not bear so well the depletory treatment of this country, as far as regards blood-letting; but, secondly, because the system of purgation here is particularly miscalculated to allay irritation and inflammation of the inner surface of the stomach and bowels. In fact, we have not been in the habit of sufficiently attending to the great difference of symptoms and treatment, dependant on the structure in which the inflammation is seated. Let us then divest ourselves of all foolish prejudice, and listen to the dictates of reason and experience.

B. *Treatment of Acute Gastritis.* The *prevention* of this disease may be easily gathered from a contemplation of the causes. When gastritis is unequivocally manifested by the symptoms already enumerated, we must not dread debility by cutting off every species of food, and every kind of drink but the bland fluids alluded to, from even drunkards and gluttons. During the first days, then, of acute gastritis, nothing should be permitted internally, but small quantities.

at a time, of dilute lemonade, or the other fluids above indicated. This absolute prohibition should continue till the febrile movements and sympathetic nervous disturbance cease. Then, and not till then, should we venture on even the farinaceous decoctions, or the infusions of the saccharine fruits, as apple or pear tea, &c. Nor till this period should veal or chicken broth be allowed. Next, in order of aliment, but not for some days after the farinaceous regimen, panada, bouilli, soup, may be cautiously ventured on. Solid aliments should be abstained from till every symptom is gone, and repeated proofs are offered of the return of the digestive powers. Then they should be of the lightest and tenderest kind, and small in quantity. Here M. Broussais introduces an instructive case in illustration, which we shall insert, but considerably condensed in language.

"*Case* XXVIII. M———, 48 years of age, stout and muscular, had lived, during the last four years, an irregular life, in respect to food and drink, accompanied by some gastric derangements, which were removed from time to time, by gentle evacuations, diluents, and tonics. In October, 1807, he committed a great debauch in eating and drinking, and was seized, after retiring to bed, with sudden vomiting and purging. Every kind of drink which he swallowed was instantly rejected, and the stools became black and fetid, but passed without any pain. The pulse was unaffected. This cholera continued four hours. When over, the debility seemed extreme. Antispasmodics, tonics, &c. But soon the pulse rose in force and frequency—the skin became hot—the mouth dry—the tongue coated. In short, he soon presented the characters of low or adynamic fever, and his physician prescribed wine and water. The pulse keeping up, no stronger stimulants than the above were exhibited, and in three or four days the febrile symptoms disappeared. His physician now permitted a little light food and two or three glasses of claret, to recruit his strength, while some rhubarb and manna were given to procure some stools, constipation having succeeded to cholera. Stools were procured, and two days passed thus, in supposed convalescence. But on the third day, the tenth from the attack, high fever, red eyes, loquacious delirium, great restlessness, and surprising change of countenance took place. The idea of typhoid fever now took possession of the physician's mind, and camphorated decoction of cinchona, with stimulant antispasmodics were prescribed. These being ineffectual, recourse was had to sinapisms to the legs. The disease increased, and next day (11th) M. Broussais was called to the patient, who presented the following symptoms:—face distorted—eyes haggard, with the conjunctiva of a deep red colour—countenance that of a person insane, or in the last stage of putrid fever—tongue clean—skin dry and hot—pulse hard, frequent, and rather strong—constipated bowels—all the excretions checked—no gastric or abdominal pain on pressure. When asked how he did, he replied 'very well.'

All his expressions were incongruous. He picked the bed-clothes —his muscular powers were extremely depressed—his voice and limbs trembled. The history of the complaint and the phenomena convinced M. Broussais that the commotion of the nervous system was owing to phlogosis of the mucous membrane of the stomach, and prescribed gum tragacanth solution, sweetened with some lemon sirup, to the exclusion of every other kind of ingesta. In the evening the pulse was softer—he had made water thrice abundantly—restlessness was less—and, during the night, some moisture appeared on the skin. 12*th day*. The symptoms continued to meliorate ; and on the 13th he had a keen appetite. A little vermicelli. 14*th day*. Another vermicelli in the morning. In the course of the day, the fever and delirium rose again. A clyster brought away five stools, the first solid, the others black and fetid. On the 15*th day*, he took a little farinaceous aliment, followed by much malaise and debility. On the 16th, in consequence of dyspeptic appearances of the mouth, and great weakness, some light tonics were ventured on. Barley ptisan with sirup of orange peel was given. Quickly there came on great heat of stomach, quick pulse, anxiety, colic, and other disagreeable symptoms. M. Broussais was again summoned, and changed the foregoing drink for lemonade. Great melioration of symptoms—in a few hours tranquillity was restored ; and next day the appetite returned. Two days after this, some rice was imprudently given to the patient, followed by a renewed train of fever, delirium, &c. It was now evident to the most ignorant and prejudiced bystander, that food always reproduced the bad symptoms, and that the stomach was incapable of digesting any thing beyond lemonade, to which the patient was rigidly confined for the next two days. Tranquillity was now secured, and on the 22d day from the commencement of the attack, there only remained debility, which was removed in a reasonable time, by a gradual and careful return to nourishing food."

To M. Broussais, who was long accustomed to see gastric irritation give way, with very little resistance, to diluting drinks, and the most rigorous regimen, it appeared incontestable that the foregoing case would have terminated favourably on the fourth day, had not the febrile movement, succeeding the cholera, been treated as a putrid fever. He attributes the relapse, in the first instance, to the vermicelli, the claret, and the purgative. The subsequent exasperations of the complaint by errors of diet are too remarkable to require notice here. M. Broussais observes, in this place, that delirium is one of the worst symptoms in acute gastritis, as he has seen but few recoveries where it had taken place.

The next case (being the 31st of our author's) which we shall give some account of, was one where acute gastritis simulated malignant fever.

Case. Sauriot, 28 years of age, robust and well made, fell ill on the 23d July, 1807, at Udina, during a season of great heat. M. Broussais did not see him till the 28th, the 5th day of the disease. He was then cadaverously pale, and extremely dibilitated. He lay on his bed motionless—his eyes closed, and his limbs thrown apart. This state of depression was occasionally interrupted by feeble groans, and contortions of the body, with change of posture when spoken to. He could not pronounce a word. When he opened his eyes, they appeared as though he was moribund. He indicated by signs and gestures that the epigastrium and upper part of the belly were the seat of his sufferings. He refused to take any thing—but when prevailed upon to swallow any liquid, he immediately vomited. Constipation was obstinate. His limbs were cold—the pulse small and slow—the face of a leaden colour—no fœtor of the excretions. Although no history of this case could be traced, yet the season of the year, and the circumstance of many others being ill at the time, convinced M. Broussais that the disease was not putrid fever, but irritation and inflammation of the mucous membrane of the stomach. His determination therefore was soon taken. He prescribed no other medicine than mucilaginous drink, acidulated with citric acid, and "*Lait de Poule,*" for aliment. This plan was continued for six days, during which all the symptoms were gradually meliorated, but the bowels had not acted. On this account hydromel was substituted, for one day, instead of the mucilaginous drink, and several stools were procured.

From this time all went well, and he was discharged to duty in thirty days from his entrance into the hospital.

The following case of acute gastritis, preceded for a long time by irritation in the stomach, holds forth important matter for reflection and preventive measures. We shall compress the long original details as much as possible.

Case. Mons. P————, 39 years of age, robust and muscular, complained, during the summer heats of 1806, that his appetite was gone—his digestion slow, and his bowels confined. He was grown pallid, and wasted a little. M. Broussais advised him to drink his wine more diluted—to lessen the quantity of his food—and to leave off coffee and liqueurs. The latter part of the advice was not followed. When the cool weather set in, finding his stomach complaint somewhat relieved, he adopted all his former habits. He now became so costive that he rarely had a stool without the assistance of enemata. He felt as though a bar crossed in the line of the transverse arch of the colon, with an obstruction to swallowing from something in the chest.

In this way he continued about five months, when his appetite totally failed for a few days, but by abstinence and diluents returned a little. On the 25th January, 1807, having eaten some teal, he felt greatly incommoded. At this time chronic *irritation* seemed to have assumed the more formidable character of inflammation, denoted by the following symptoms:—a most disagreeable sense of weight at the epigastrium, with the transverse bar above alluded to—general malaise—irregular shiverings and flushings, which, for two days preceding M. Broussais's attendance, led the bystanders to believe, that Mons. P. had an ague. When our author saw the patient, three days from the eating of the wild fowl, his cheeks were red—countenance desponding—tongue dry, and a little white in the middle—breath somewhat offensive—every thing he swallowed lay like a stone in his stomach—urine very scanty—pulse hard, vibrating, and rather frequent. He was put on lemonade, and ordered to take every half hour a spoonful of a mixture of oil of almonds and lemon sirup. He passed the night much easier than the preceding ones. Next day the symptoms were somewhat mitigated; and fomentations were ordered to the epigastrium, with an oily enema. In the evening the pulse fell—he had no shiverings—passed a good stool, and made abundance of urine.

From this time the recovery was progressive, but slow, and he was not able to return to his regular diet till 34 days from the supervention of the acute form of the disease.

This case, M. Broussais observes, is important, inasmuch as it shows that gastritis, long preceded by irritation in the stomach, may be checked in a few days by diluents and demulcents alone. We shall now introduce a case of chronic gastritis.

C. *Ch. Gastritis.* Danton, 20 years of age, while marching as a conscript to join his corps at Redina, was forced to enter the hospital of Brescia, on account of obstinate and severe pains in his stomach, about the middle of November, 1809. He was not affected with vomiting; but he had lost his appetite, and felt very ill after eating any thing. He remained eleven days in the hospital, without experiencing any relief. He then joined his corps, where he continued in the same sufferings, with such increase of emaciation and debility, as compelled him to enter the hospital of Redina, on the 26th of December, 42 days after the commencement of the disease. M. Broussais found him pallid, dejected, incapable of any exertion, without appetite, and costive—in short, in an incipient state of marasmus. He complained of obtuse and deep-seated pain in the epigastrium, accompanied with

constant malaise. The region of the stomach was somewhat full, and when pressed on occasioned pain. The pulse was small and hard, and rather frequent—skin dry to the touch, and hot. Believing all these symptoms to be dependent on gastric irritation, our author considered that only mucilaginous emollient aliment and medicine were necessary to deprive the gastric membrane of its excess of sensibility. For two days, therefore, the patient was confined to mucilaginous and acidulated drink and weak broth—then some bouilli for diet. He did well. During convalescence some antispasmodic and anodyne medicine was given him, for the purpose of procuring better sleep. A relapse immediately occurred, and he was forced to adopt the same rigid system as before. The convalescence was tedious, but ultimately health was completely restored.

Here M. Broussais observes, that, in the treatment of chronic gastritis, we are not so much to regard the length of time which the disease has existed, as the degree of debility or marasmus to which it has reduced the patient. So long as the muscles are not greatly extenuated, marasmus is not to be considered as established; and although the patient appears excessively debilitated, we must not be in haste to exhibit tonic and strengthening medicines or food. Strength is not annihilated, but temporarily subdued by the gastric irritation and pain. When to the absence of extenuation is added a knowledge that the disease was slight at first, and maintained by improper stimulants, we have every reason to hope for recovery by rigid abstinence and aqueous emollients. It is surprising how rapid the change, sometimes in such cases, from sickness to health, by the simple means above mentioned. "*La promptitude de l'amelioration est plutôt due à l'absence de toute irritation, qu'à une vertu specifique des medicamens.*" We consider an abridgment of the following case not unworthy of record here.

Case of Chronic Gastritis. Meurat, a gunner, 32 years of age, was treated in one of the hospitals of the Frioul, in May, 1807, for an intermittent fever, accompanied with vomiting during the paroxysms. He was given emetics, and afterward the bark, which suppressed the fever, and he was soon discharged to duty apparently well, except that his stomach was rather irritable. On the 15th day after his discharge, he was suddenly seized with vomiting of his food, on account of which he drank a little more wine than usual to strengthen his stomach. In this state of gastric irritation he continued fifty days. But the vomiting becoming more violent, and accompanied with very severe pains in the epigastric region, lassitude, debility, and general ma-

laise, he was sent to the hospital of Udina, on the 14th of July, 1807, on the 50th day of the vomiting, and about two months and a half after the cure of his ague. His eye was now sunk—his complexion that of lead, with a yellowish tinge—adipose membrane entirely absorbed—muscles not extremely extenuated—the whole surface cold as a corpse —pulse scarcely perceptible—inability to sit up—constant jactitation—deep and plaintive sighings—throws the clothes off his chest, and his arms out of bed—nearly incapable of speaking—quite delirious. He vomited every thing that was given to him, and continued to strain violently after the stomach was empty. The epigastrium being pressed evidently increased his sufferings. He was every instant at the close-stool, but passed only mucus and blood. He was ordered to have nothing but solution of gum arabic, or sweetened linseed tea, and during the first three days, he had nothing in the shape of aliment, except a little "*lait de poule.*"* On the fifth day from his entrance into the hospital, the vomiting ceased, and on that day he had but two stools. The pulse was now developed, but hard and quick —the skin warm and moist—the delirium had disappeared two days after his arrival—craved for some food—the epigastrium still very tender to the touch. Very weak broth in the morning—lait de poule at night. The epigastrium gradually lost its tenderness, and in two or three days the febrile symptoms subsided. From that time the patient began to gain flesh and strength, and in three weeks from his arrival in the hospital he was discharged to duty cured.

The above, and many similar cases, may convince us that the subduction of stimuli alone will go far to cure inflammatory irritation of the mucous membrane of the stomach; and it may serve to restrain a little the "*medicina perturbatrix*," or, at all events, the *poly-pharmacy* of British practice, which too often crams the stomach with medicines, without discriminating minutely between affections of the inner and outer coverings of this important organ and its appendages, though such a discrimination is of infinite importance in the treatment of the case. We seriously caution our brethren against resolutely shutting their eyes against this simple and apparently inefficacious practice of continental physicians, *in the class of complaints now under consideration*, for we are far from approving the practice generally in acute diseases of other structures in the body.

D. *Chronic Latent Gastritis.* In by far the greater num-

* The yelk of an egg beat up with a little sugar and rose water.

ber of cases, gastric irritation does not, at the beginning, create that degree of disturbance in the animal economy which may clearly indicate the nature of the disease, and therefore it passes, among the generality of observers, for what are vaguely termed *bilious* and stomach complaints. How are we, in such cases, to discover the true state of affairs? An inquiry into causes, modes of life, climate, occupation, &c. will often furnish us with strong grounds for presumption, and an attentive observation of the progress of the complaint will do the rest. Gastritis so slight as not to be recognised by the general symptoms, enumerated in their proper place, will not, M. Broussais thinks, be materially injured by the administration of an emetic. A temporary mitigation, indeed, of the symptoms generally ensues. The relief, however, is only temporary; but the subsequent recurrence of the symptoms is a valuable diagnostic. Whenever therefore we find fever, pain, and anorexia developed, after such a process, there is no longer any doubt upon the subject, and then rigid abstinence, with the bland diluents, before described, are to be immediately insisted on.

In the summer of 1806, M. Broussais had a great number of these cases under his care. He began, in all cases, with the plan of abstinence and diluents, and the majority of the cases speedily got well. Where anorexia, bitter taste in the mouth, nausea, dryness of the skin, eructations and flatulence continued, then the patients were vomited, and the appetite immediately returned. The bowels, however, in these cases, required purgatives to clear away the saburra remaining in them. In some cases, indeed, febrile movements continued after the operation just mentioned, and in these a kind of bilious fever ran a course of four, five, or six days. Even here there was nothing else required than aperients and diluents—no bitters, no tonics were given. There was another class of patients that came under M. Broussais's care, with the following obscure symptoms:—paleness of the countenance, without any yellow tinge—some trifling appetite for breakfast, but not afterward—after eating any thing in the evening, a sense of plenitude, as though they had over eaten—no pain, but a sense of undefined weakness, with tottering of the limbs, habitual constipation, and slow pulse. When to these patients' were given bark, bitters, or other kinds of tonics, then the pulse was raised, febrile heat, and other pyrexial symptoms, excited, and in a short time unequivocal gastritis was developed. M. Broussais therefore treated these cases in the same manner as chronic phlogosis of the mucous membrane

of the stomach, and firmly believes, that, by so doing, he saved a great number of lives.

"Those physicians," says our author, "who have profited by the lessons of M. Pinel, well know that this experienced practitioner never lost an opportunity of recommending the most mild vegetable and unirritating regimen to those hypochrondriacal, melancholic, vapourish, and (supposed) obstructed patients, who, after having exhausted the whole catalogue of deobstruents, stomachics, purgatives, &c. &c. applied to him to put an end to their sufferings. Numbers have I seen cured by him, after abandoning their drugs, to live only on panada, milk, eggs, and fruit. But it is not easy to persuade the upper classes of society, especially after they have been habituated to spirituous liquors, to betake themselves to food and drink which they consider as insipid, and which, for a short time, appear to be productive of debility. Yet they have but to persevere, for some time, and they will find this regimen not only very pleasant, but a most effectual mode of restoring them to health." *Tom.* II. *p.* 341.

We shall pass over M. Broussais's observations on the treatment of complications of gastritis with intermittent fever, in order to come to the *methodus medendi* in phlogosis of the mucous membrane of the *intestines.*

VII. The phlogosis in question but rarely affects the lining membrane of the small intestines. When it happens, in particular cases, to pass the valve of the colon, and ascend towards the stomach, it generally proves fatal. M. Broussais therefore only treats, in this place, of phlogosis of the mucous membrane of the colon—and first of the treatment in acute colonitis, as the grand preservative from the chronic state. Although M. Broussais considers dysentery to be essentially inflammation of the inner coat of the intestines, yet he believes that, as the same miasmal causes (animal or vegetable) which produce typhus, and other contagious fevers, produce dysentery, so the phlegmasiæ, in these cases, are so modified by the causes, and rendered so intense, as often to end in gangrene before art can interfere to prevent such a fatal termination. It is perfectly evident that the wide-wasting dysenteries of our colonial possessions would almost invariably destroy their victims under the French system of treatment, and therefore M. Broussais very wisely declines entering on the subject at all. He confines his observations to those simple phlogosed states of the lining membrane of the large intestines particularly, which, attacking a man in perfect health, do not acquire violence, excepting by maltreatment. From the moment that acute colonitis is declared, the patient must not only abstain from all stimulating drink, but from every kind of alimentary

substance capable of leaving any fœcal residue in the bowels. Notwithstanding the atrocity of the pain, and the sense of debility with which the patient is overwhelmed in the intervals, we must not depart from the foregoing principle, so long as emaciation is absent.

The medicines which M. Broussais has found most proper to diminish the intestinal irritation, are the mucilaginous and farinaceous substances. In high states of irritation, he thinks that gum water *only* should be allowed—rice water is then too stimulant, because it requires some digestive effort. Even the simplest mucilaginous drinks are not to be indulged in too freely, lest by their very bulk they should act as extraneous bodies. This plan must be persevered in, as long as the stools are frequent, and the tenesmus violent. Meanwhile fomentations and cataplasms over the whole abdomen will be very useful. All kinds of enemata he considers as worse than useless, excepting in the very onset of the disease, where fæces may be keeping up additional irritation. In such cases their expulsion should be attempted, first by oily or mucilaginous lavements, and, if thatbe not sufficient, by manna or other mild purgatives.

"Au reste, tous ces moyens évacuans ne sont indiqués qu'autant que les excrémens sont opiniâtrement retenus. Le plus souvent ils sont inutiles, parce que le premier effet de l'irritation dyssentérique est de débarrasser l'intestin de toutes les matières qui y séjournaient. Cela étant fait par la nature, il suffit à l'art de ne pas fournir de nouveaux excrémens." *Broussais*, 356.

We agree with M. Broussais, that it is the part of the physician to prevent, as far as possible, the formation of excrementitious matters in the intestines by means of rigid abstinence; yet such is the determination of fluids to the mucous membrane of the bowels, that the most severe regimen will not prevent a great generation of morbid and acrid secretions there. On this account, oily laxatives are frequently necessary in the course of dysentery, though we condemn, as much as he can do, the daily administration of purgatives, in a disease, the principal feature of which is high irritation, if not inflammation of the lining membrane of the intestines. M. Broussais calls in the assistance of the warm bath, rubifacients, blisters, and frictions, when the dysentery appears to be the result of a violent crisis, or a metastasis of inflammation or irritation from some other tissue. "Opium, dans tous ces cas, et fort utile; mais tous ces moyens sont, pour ainsi dire impuissans, sans le concours du régime que nous avons recommandé." Our author affirms, that this strict abstinence succeeded, in almost all

cases, however violent, provided the patient came early under his care. We cannot say nay to this practice, never having given it a fair trial; but we have no hesitation in believing that it would, at all events, be an excellent basis, or groundwork for the treatment of dysentery in this country, and even in the colonies. We should not certainly trust to it alone, knowing, as we do, the indomitable nature of the disease when suffered to advance towards alteration of structure in the intestinal lining membrane. Broussais seems to despise all means of turning the tide of the circulation towards the surface of the body by internal medicines, and also to dread opium, excepting in some particular cases. Yet we can assure him, and it is now universally known in this country to all who have had any experience in the disease, that a combination of sudorifics and anodynes, with a proper proportion of a mercurial preparation, is by far the most powerful means we possess in allaying the intestinal irritation, and determining to the skin. In this country very severe bowel complaints may be safely and effectually treated with cretaceous mixture and tincture of opium, after each liquid motion, while five or six grains of the blue pill, with a quarter of a grain of opium, and three or four grains of antimonial powder, are taken twice, thrice, or oftener in the 24 hours. During this time the patient should be confined to bed, and the Broussaian regimen strictly adopted.

Treatment of Chronic Enteritis. A diarrhœa continuing after the 30th day must depend, M. Broussais thinks, on *organic* derangement of the mucous membrane of the colon. In general, however, it is kept up by improper regimen or medicines only. In all cases it is a chronic phlogosis, the treatment of which, he conceives, may be fixed by invariable rules. These rules may be easily anticipated by what has already been said. The food must be such as leaves the least feculence to pass along the intestines; and, of course, the quantity should be no more than the stomach and duodenum can digest, otherwise the remains, when mixed with bile and mucus, will undergo fermentative and other decompositions in the tract of the intestines, which, with the gases evolved, create much irritation there. On this account, gentle tonics are serviceable, by strengthening the tone of the stomach; but care must be taken that their action does not go beyond the stomach, otherwise they are likely to aggravate the complaint. The remains of animal food, our author thinks, are much more injurious than those of vegetable; but of vegetables there must be much selection—the farinaceæ alone are admissible in chronic bowel

complaints. Barley, wheat, and rice are preferable to all others. Bread produces too much feculence. Fine flour boiled with milk, forms (as we have experienced) a most excellent diet for chronic dysenteries. Broussais cured great numbers of patients in the military hospitals by this diet.

"Dans la pratique civile, il y a pour encrecmir la nutrition d'un diarrhéique, sans lui laisser beaucoup d'excrémens, mille ressources dont on est privé par les régimens des hôpitaux militaires. On trouvera dans les semoules, les grumx, les pates au vermicelles, pourvu qu'ils soient très-fins, des moyens de varier agréablement la nourriture, en combinant ces diverses substances avec le lait, la crême, les œufs, le sucre, selon le goût du malade et le degré de sa faculté digestive." 262.

When the digestion is pretty good, meat broths may be cautiously allowed. Whenever they render the stools more frequent, they are to be discontinued, at least for a time. Sweet and ripe fruits, rejecting the seeds and rinds, may be sometimes allowed as a variety.

In chronic phlogosis of the mucous membrane of the colon —in other words, chronic bowel-complaints, our author reduces the list of medicinals to two classes—stomachics and anodynes. When the general erethism attending the commencement of the complaint is completely subsided, but some local pain remains, M. Broussais prescribes solutions of gum tragacanth rendered gently anodyne by Sydenham's laudanum, varying the dose from 12 to 50 or 60 drops of the tincture. These medicines will not be serviceable unless combined with the rigid regimen before alluded to. As the dysenteric symptoms subside, gentle tonics, and gradually increasing aliment are to be allowed. Astringents, at all times, M. Broussais thinks, augment the phlogosis by checking the alvine evacuations. A little wine, or an infusion of cinchona or canella alba extremely weak, is sufficient to solicit the stomach to a resumption of its functions towards the close of the disease. Ipecacuan, as a vomit, our author has not found useful, excepting at the very beginning, when the stomach happens to be loaded. It does not possess, he thinks, any anti-dysenteric properties. The action of vomiting he does not believe to possess any power in checking the increased peristaltic motion of the intestines. When phlogosis of the mucous membrane of the bowels is the cause of the purging, vomiting cannot arrest it. If the diarrhœa depend on irritating matters in the primæ viæ, then it does harm by checking the operation of nature in removing them. In short, it is not the mere *symptom* of purging that we are to combat, but the cause of the phenomenon.

From a number of experiments made with tincture of

opium on eruptions of the skin, M. Broussais comes to the conclusion that its first effect is highly stimulant, quickly followed by a sedative operation. He endeavours to explain its beneficial effects in dysenteric complaints on this principle—namely, that, though it may give a momentary increase of excitement to the stomach and upper intestines, a torpor is subsequently induced, which allays the spasmodic contortions of the colon for a certain time. The precautions which he thinks are necessary in administering this remedy in the class of diseases under review, are, 1^mo. never to exhibit opium when a *general* inflammatory diathesis prevails. 2^ndo. to forbid the use of this remedy when the stomach is phlogosed. 3^tio. to abstain from laudanum until the bowels are cleared of all stercoraceous or bilious secretions, either by the spontaneous operations of Nature, or by the effects of aperients administered for that purpose. 4^to. to exhibit this anodyne at first in small doses, and in a demulcent vehicle, when the local erethism is considerable; gradually augmenting the dose till the effect of procuring some sleep is obtained, moderating, if necessary, the stupifying effects of the opium by vegetable acids.* We shall give M. Broussais's rationale of the operation of opium in dysentery in his own words.

"L'excitation passagère que sa première impression détermine, est fort peu ressentie par le colon phlogosé : c'est l'estomac principalement qui doit la supporter ; il ne faut pas qu'elle aille jusqu'à augmenter sensiblement l'activité de l'appareil circulatoire. Au contraire, la stupeur toujours plus prolongée qui succède à cette stimulation, est partagée par toutes les ramifications nerveuses, et surtout par celles qui se distribuent dans les fibres musculaires et dans les papilles de la partie souffrante." 371.

We may here observe, that we believe the above observations of M. Broussais to be correct, as relating to the exhibition of opium *alone* in dysenteric affections. Our continental neighbours have such a dread of poly-pharmacy, that they deprive themselves of many valuable combinations used in this country. They have no idea that a combination of opium and antimony or ipecacuan, or of both of these with mercury, can have any better effect than these medicines separately administered. In this country we know better. Ample experience has demonstrated the safety with which

* "Care must be taken that in administering vegetable acids the opium be no longer in the stomach, since, according to the experiments of Orfila, a mixture of acids and narcotics irritates and even inflames the gastric mucous membrane."

opium may be given, in the above and other formulæ, during even acute inflammation of various organs; and in no class of complaints is this combination so powerful and beneficial, as in that which forms the subject of this essay. We trust, however, that the investigation which we have entered into here, will have no inconsiderable effect in restraining the practice of *purging* in dysenteric affections of the bowels in this country, where it has reigned since the days of Cullen—the words, "*retentis plerumque fecibus alvinis*," appearing to have radiated from alma mater the dangerous principle of *purgation*, as almost the sole remedy. The subject of the present article being one of the highest importance, we will be pardoned, we hope, for detaining our readers some time longer, while offering for their attentive consideration a few necrological histories from the eminent pathologist whose work is under review; which histories we shall abbreviate as much as possible, while we are select in our choice of those which are most likely to leave a salutary impression on the mind.

Case of Acute Gastritis simulating Catarrh and low continued Fever. "M. Beau, sub-assistant surgeon of the 18th regiment, 24 years of age, had had several attacks of severe catarrhal affection, and also of hæmoptysis. He was very studious, and had undergone great fatigues at an hospital in Gorizia. While there, he breakfasted for a fortnight on bread soaked in sugared wine, being before accustomed to coffee. This regimen he found heated him much, and rendered him more than usually irritable. He sent for M. Broussais on the 7th March at Udina, who found him complaining of unpleasant heat in the stomach, want of appetite, considerable fever, pulse full, hard, occasionally intermittent, intense heat, but little thirst, pain in the chest, with sense of constriction, great anxiety and restlessness, inclination to cough, but fear of throwing the respiratory muscles into action, on account of the pain. *The pulmonary irritation and force of the pulse indicated venesection, but the intermissions of the pulse, and the patient's having been in an hospital where typhus prevailed, prevented M. Broussais opening a vein!* A decoction of figs, therefore, and a blister to the sternum were prescribed, but the blister was not acceded to. Next day all the symptoms were aggravated, and the young man himself loudly demanded to be bled. Broussais, instead of complying, ordered eight leeches to the epigastrium. The young man applied sixteen. The leeches bled profusely, and the flow of blood could hardly be stopped. Next day there was great faintness, with some delirium:

but the pulse was down, the tharacic pain gone, and scarcely any cough. M. Broussais ordered decoction of bark, with a little wine, and gummy emulsion. These were vomited as soon as swallowed—(and fortunately too we think)—the same followed the exhibition of aromatic and antispasmodic juleps. Gum water with lemon juice succeeded better. In two days the pulse rose again, with anxiety, and efforts to cough—gum water acidulated continued. It is needless to say, that the patient got worse and worse—a consultation was called, but the new physician saw putrid fever instead of gastric inflammation in the case; stimulants were lavished on the patient—"les stimulans de toute espece furent prodigiés." "The unhappy youth had no longer strength to vomit them up, but his cruel sufferings augmented in proportion to the quantity of medicine he swallowed," and he died on the 16th day of his illness.

"*Dissection.* Pia mater, particularly over the left hemisphere, strongly injected—cerebral substance firm and red—ventricles a little dilated with serum. In the chest every thing sound. In the abdomen, the stomach was found contracted to the size of a small intestine—of firm consistence—the mucous membrane thickened, and throughout its whole extent of a livid red colour, in some points black. All the intestines contracted, and their mucous lining of a shining red colour."

This case happened when M. Broussais was opening his eyes to the disastrous effects of Brunonian practice in fevers, and when he was beginning to discover local inflammation, especially of the mucous membrane of the primæ viæ, as the basis of many reputed idiopathic fevers. The practice therefore detailed above, may be not only accounted for, but, in some degree excused. Our author has no hesitation in believing that he might have saved the patient, if he had confined him rigidly to mucilaginous drink from the time he first saw him. It was this case that first led him to question the power of blood-letting in *completely* subduing mucogastric inflammation. Further experience confirmed him in the belief that bleeding has but a very subordinate control over phlogosis seated in the hollow and thin viscera, especially in their inner surfaces. It is over inflammation of the solid and parenchymatous viscera, rich in sanguineous capillaries, and the membranes that cover them, that bleeding exerts a masterly control. The cough in this and in numerous others under his care, was purely sympathetic, arising from irritation of the extremities of the par vagum in the stomach. In respect to the brain, the central organ of sensation, how can we expect that this part can escape in diseases accompanied with much pain. "Tel organe qui

n'éprouvait d'abord qu'un trouble sympathique, peut s'affectuer organiquement par le seul effet de la douleur." This we are sure is sound pathology.

Acute Gastritis imitating low Fever. Venter, a young man of 22 years, presented himself to M. Broussais on the 1st July, 1807, with symptoms of stomach affection, viz. anorexia, slight nausea, some prostration of strength. These symptoms had been of six days standing. Suspecting gastric susceptibility bordering on phlogosis, M. Broussais only prescribed demulcent and acidulated drinks. He grew quickly better, which induced the Doctor to grant him some victuals, especially as it seemed hard to refuse them to a man, who all day walked about the wards and corridors of the hospital. After spending five or six days in this ambiguous state, the young man began to complain that he passed his nights badly—that he had cold chills, and that his mind was confused. M. Broussais thought he could not run much risk, in ordering for these symptoms some doses of cinchona and a little wine. Two days of this treatment produced no melioration, and M. Broussais paid the patient a visit at night. He found the young man with hot skin, contracted visage, accelerated pulse, and restlessness. He now became convinced that he had to deal with obscure gastritis, tending to the acute form. The most rigid regimen was, therefore, instantly adopted, namely, mucilaginous acidulated drinks. But he was not relieved—there was delirium at night—trembling efforts to get out of bed—grinding of the teeth. He expired the next evening.

Dissection. No appreciable lesion in the head or chest. The mucous membrane of the stomach thickened, red, and, in some places, even black. The inner surface of the intestines presented the same appearance. From the stomach to the anus nothing was to be seen in the alimentary canal but a white firm exudation, very difficult to detach from the inflamed surfaces of the guts.

The following case is still more insidious than the one just related, inasmuch as it masked the greatest malignity under a benign and perfidious aspect, uniting the rapid march of *acute*, with the symptoms of *chronic*, gastritis.

Case of Acute Apyrectic Gastritis. Rapion, 25 years of age, robust and well made, had, for several weeks past, lost his appetite, and felt some nausea at the stomach. He took (of his own accord) an emetic, which exasperated the symptoms. Entered the hospital on the 5th June, 1806, five days after taking the emetic. He had now anorexia, con-

stant nausea, headach, slight febrile movement, and relaxation of the bowels. On a more minute examination, M. Broussais found that Rapion vomited his food, and that he had a constant pain in his stomach, extending to the whole of the abdomen, with a sense of constriction, small, frequent pulse, skin rather cold than warm, tongue natural, strength undiminished. M. Broussais suspected gastritis, and prescribed mucilaginous acidulated drinks, with fomentations to the epigastrium. During the next four days there was no alteration in the symptoms. On the 5th day M. Broussais found the patient stretched on his bed, with his clothes on, for his sufferings and the diarrhœa did not permit him to lie in bed undressed. He appeared somewhat delirious; complained of being very ill;—yet his strength was not greatly prostrated. A few hours afterward he was seized with convulsions and horrible anxiety. He fell into a state of syncope, and expired.

Dissection. Nothing particular in the chest. In the abdomen the whole intestinal canal was contracted—the mucous membrane of a deep red colour, and thickened from the cardiac orifice of the stomach to the anus, but without ulceration.

The following case of *chronic* gastritis will exemplify the effects of good and of bad regimen.

Papillon, 22 years of age, entered the hospital of Udina on the 18th July, 1805, complaining of distaste for all kinds of victuals, and constant inclination to vomit, with diarrhœa. He reported that he had been ill but sixteen days, yet he was considerably emaciated. His tongue was moist and clean, his pulse nowise febrile. M. Broussais pronounced the disease to be chronic gastritis, and put the patient on acidulated mucilaginous drinks, with a very little bouilli for food. At the end of three or four days the nausea and diarrhœa were considerably mitigated—the appetite had returned a little, and in four days more was very considerable; the diarrhœa being reduced to two or three motions in the 24 hours, and those passed without pain. Still M. Broussais considered it dangerous to allow the patient more solid or abundant food than a little soup, or rice with a small quantity of bouilli. All at once, however, the patient was found complaining of pain in the stomach, nausea, vomiting, and great increase of the diarrhœa, with tenesmus. M. Broussais caused his bed to be searched, and it was discovered that the patient had gorged himself with cold meat and bread. From this relapse till the patient's death, which took place twelve days afterward, he vomited every thing

which was taken into the stomach. The diarrhœa amounted to severe dysentery, and the march of the marasmus was surprising. All this time the circulating system showed no evidence of febrile movement.

Dissection. Body greatly emaciated—vessels of the head engorged, and the cerebral substance red and firm—thoracic viscera sound—stomach so contracted as to leave no cavity—intestines greatly contracted also—mucous membrane thickened, dry, and of a deep red colour, resembling linen steeped in port wine—the mesenteric capillary vessels much injected, while their trunks contained hardly any blood. The serous or peritonæal covering of the intestines unaffected. The body, when opened, exhaled a remarkable ammoniacal odour.

We find that our limits will not permit us to introduce more than another case.

Chronic Muco-Enteritis, propagated to the Stomach. A drummer in the 9th regiment of the line, 24 years of age, slender, but active, became affected with an intermittent fever for two months, in Germany, without using any remedy. He was then sent to an hospital, two months after which he came under M. Broussais at Udina. He was now emaciated in the second degree—had from five to six stools *per diem*, with colic and much uneasiness. The pulse was nowise febrile. He was placed on rice water, mucilaginous acidulated drinks, and farinaceous aliment. In a few days the diarrhœa was reduced to two stools *per diem*, without pain—the appetite returned—the complexion cleared, and the patient was in full march towards convalescence. M. Broussais now ventured to gradually increase the food until he came to ⅔ds allowance or more. All at once the diarrhœa and colic returned, and in three or four days, he lost all the flesh he had gained in thirty. He grew rapidly enfeebled. M. Broussais now learned that the impatient patient, tormented with his appetite, had purchased provisions from his comrades frequently. He was now put back to the original regimen; but too late! In ten days he was reduced to a complete state of marasmus, although the bowel complaint was moderate, not exceeding two or three stools daily. Vomiting now came on, with entire loss of appetite, great anxiety, frequency of pulse, and heat of skin. It was now evident that the phlogosis had reached the stomach. Yet he lived twenty days longer, when he died a perfect skeleton. On dissection, the whole alimentary canal was found so contracted, as to have all its internal surfaces almost in contact.

In the stomach, this membrane was red, thickened, and covered with a yellowish exudation about the pylorus. Throughout the whole of the intestinal canal, the mucous membrane was dry, and of a logwood colour, with scarcely any fecal contents.

Before closing this paper we shall introduce an extract from Dr. Abercrombie, showing that gentleman's sentiments respecting the treatment of affections of the mucous membrane of the alimentary canal.

"The active form of the disease, especially in its early stages, is to be considered as an inflammatory affection of the most dangerous kind, and requiring to be treated with activity by the usual remedies—especially blood-letting. The first urgency of the inflammation being thus subdued, if the pulse continue frequent, digitalis is given with much advantage, or Dover's powder, in repeated doses; and, after the necessary bleeding, moderate opiates may be given, with mucilaginous articles and absorbents, or opiate clysters. The effect of purgatives is extremely ambiguous. In the more severe cases, they evidently aggravate the symptoms. There may be cases in which it is expedient to evacuate the bowels, as when the discharges are scanty and slimy, with retention of natural fæces, but the practice requires caution; and in the more common form of the disease, with copious discharges, they appear to be injurious. Though the evacuations in such cases may be of an unnatural appearance, it is to be remembered, that this is the result of morbid secretions, not to be corrected by purgatives, but by curing the disease on which they depend. When the disease appears to be seated in the lower part of the great intestine, bleeding from the hæmorrhoidal vessels might probably be useful. When the tormina are severe, with tension of the abdomen, the tobacco injection might probably be employed with benefit. Great attention should be paid to the ingesta; to keep them in as small quantity as possible, and of the mildest quality.

"It is in infants that the disease most frequently occurs to us; and there is some difficulty in determining what is the best treatment. This results from the difficulty of distinguishing the disease, so that, when a case terminates favourably, we cannot say, with certainty, that it really was an example of this dangerous affection. In some cases, in which there is no vomiting, a gentle emetic seems to be useful in the early stages; afterward, Dover's powder, combined with chalk, opiate clysters, opiate frictions, opiate plaster, and tepid bath. In some cases, the free use of digitalis seems to be extremely useful, and blistering on the abdomen. It is worthy of consideration, whether topical bleeding would be admissible in the early stages, when the disease exhibits much activity. In the advanced stages, when there is a tendency to sinking, wine is to be given very freely; when there are threatenings of coma, blistering on the neck should be employed; from both these conditions, infants often make most unexpected recoveries. When the case is accompanied, as it often is, by a peculiar and most ungovernable vomit-

ing, blistering on the epigastrium seems to be the most effectual remedy; and considerable benefit, on settling the stomach, is often obtained from the vegetable bitters, as the powder of colombo root, in doses of a few grains, repeated at short intervals. In the protracted bowel complaints of infants, in which there was reason to apprehend this affection in a chronic form, I have found nothing so useful as lime-water. The teeth are to be attended to, and the gums cut, when they appear to be giving irritation.

"In the chronic form of the disease, what we have to contend with is either the chronic fungous inflammation, or ulceration. The treatment is extremely precarious, and very few of the cases end favourably. The remedies to be kept in view, and which appear in some cases to be useful, are chiefly the following: Lime-water, the vegetable bitters, and astringents, especially the cortex cusparіæ and logwood; preparations of iron, as the tincture of the muriat, in large doses; small quantities of mercury, with opium; the resins, as turpentine and bals. copaivæ, combined with opium; sulphur, with opium; repeated blistering on the abdomen; bandaging with a broad flannel roller; the tepid salt-water bath." *Ed. Journal, p.* 347.

In respect to Dr. Grimaud's Dissertation on Inflammation of the *Follicles* of the Mucous Membrane of the Intestines, as distinguished from common Inflammation of the Membrane itself, we have only to say that we do not believe such a distinction to exist in nature—and, if it did, we are quite sure that it would never be recognised in the living subject, at least, by Dr. Grimaud's diagnostics. We shall not, therefore, waste time in entering into any analysis of the paper. Those who are more curious, may refer to it in the Journal Complimentaire, for December, 1820.

It is somewhat curious that Broussais's work should never have been translated into the English language, while several very indifferent publications have been honoured with that distinction. We confess that a literal translation would subject the English reader to a great loss of time, in consequence of endless repetitions, and redundancy of cases, with which the work is swelled out to two volumes. We are disposed to think, that we have rendered a translation, in a great degree, unnecessary, by analyzing the different parts of it in this article, and in the eclectic review on peritonæal inflammation. To most of our readers, the original work is virtually unknown, and to *them* we think we have offered something valuable. To those who were previously acquainted with M. Broussais's work, we hope this concentrated analysis of its most interesting features, will not be unacceptable, as a refresher of their memory, when, probably, they would not again go through the original. At all events, we have endeavoured to be useful to our brethren on the present occasion, and can only hope that our labour has not been thrown away.

II.

A Sketch of the Physiology and Pathology of Urine; with an Historical Introduction. By JONATHAN OSBORNE, M.B. T.C.D. Licentiate of the King's and Queen's College of Physicians in Ireland.

THE phenomena which the urine presents, attracted considerable attention even in the earliest ages, as may be seen in the writings of Hippocrates and of other ancient authors. From some cause, probably from the prevalence of uromancy and an enactment of the London College, to suppress it among physicians, the study of the excretions was for a long period made the subject of ridicule. In this age of science, however, it was natural to expect uriology would be revived, particularly as the discoveries in animo-chymical philosophy have rendered the pursuit comparatively easy. The different analyses of the urine lie scattered in various publications, and it has been the aim of the author of the Treatise before us to collect and arrange them, without making any pretensions to originality.

"Thus the following Treatise may be regarded as an index of what has been hitherto discovered, concerning the urinary secretion, and is the result of an attempt to frame for any person interested in the subject, such a sketch as I should have been desirous to possess, when I commenced my inquiries." *Pref. p. 6.*

The colouring matter of urine is soluble in water, and when an extract of urine has been obtained by evaporation, it gradually concretes into a mass of crystals. All that is soluble in alcohol may be separated from the rest by macerating the mass with four times its weight in that fluid for some time. The decanted liquor, having been slowly evaporated to the consistence of sirup, presents, on cooling, the substance called *urea*, in tabular, quadrangular crystals. This may also be detected by nitric acid. Urea is stated by Berzelius* to be a compound mass.

Uric acid is precipitated spontaneously and gradually acquires a reddish hue. It may also be diluted by nitric acid.

The lactic, the phosphoric, the muriatic, and sulphuric acids, may also be detected in the urine; and carbonic acid, which was long suspected to exist in it, was discovered by

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* Berzelius's View of the Progress and Present State of Animal Chymistry being out of print, we think that a more acceptable present could not be made to the Profession, than a second edition. The rapid sale of the work is a proof of the avidity with which the subject is pursued. *Rev.*

Vogel. The presence of carbonic acid is, however, by no means constant. Fluoric acid has been found by Berzelius.

Potash, soda, lime, magnesia, and ammonia, have been proved to exist in urine, and by various processes sulphur and silex.

The mucus of the bladder is separated by filtration.

The urea, uric acid, mucus, and the earthy phosphates, are constantly changing their proportions.

Healthy urine is always acid, and remains so for a few days, and in winter it has been found to redden litmus-paper nearly three weeks. Berzelius thinks this acidity is derived from the lactic, uric, and carbonic acids.

The specific gravity of urine ranges from 1010 to 1020.

The quantity and qualities of the urine are influenced by cutaneous exhalation and other evacuations, by exercise, by diuretics, age, posture, abstinence, various kinds of diet and medicine, particularly by acids and alkalies.

In the analysis of the urine, that passed in the morning is always to be preferred, and it should, previously to an examination, be suffered to cool. It is sometimes turbid, as soon as it is voided. This arises from an excess of alkali, or of the earthy phosphates, or from the admixture of mucus or of blood. Exposed to 160 degrees of heat it coagulates, when much albumen is present; and when this test fails, albumen may be discovered by nitric acid, or, with certain precautions, by the oxymuriate of mercury.

In examining the urine in febrile diseases, we observe the following phenomena: a greater specific gravity and higher colour than in health; the mucous cloud floats towards the surface, or is absent; a precipitate is formed with the oxymuriate of mercury; there is a tendency to become scanty. Fever is sometimes accompanied with *ardor urinæ* and *dysury*, occasioned by the deficient secretion of mucus in the bladder and urethra. These symptoms are particularly evident in hepatic affections, as have been noticed by modern observers.*

In opposition to the opinion of Dr. Scudamore, the author believes that the precipitation caused by the oxymuriate of mercury is a characteristic property of inflammatory urine, and that it appears to have some analogy with the buffy coat of the blood. The diseases furnishing most of his observations were continued fevers, hepatitis, phthisis pulmonalis, nephritis, rheumatism, and pneumonia.

* See an Essay on the Influence of Tropical Climates. By Dr. James Johnson, 8vo. London, 1818.

The crisis of continued fevers is commonly announced by a copious lateritious, or pink-coloured sediment. The same appearance takes place in the urine during the course of other diseases, as gout, acute rheumatism, and some chronic disorders, the exact nature and cause of which we have not been able to ascertain. Dr. Scudamore is of opinion that the appearance of these sediments is entirely dependent on a faulty state of the digestive organs, and on unhealthy assimilation; and we agree with him in believing, that in these cases not only are the digestive functions irregular, but that the different secreting organs are much influenced by a nervous state of the constitution.

In putrid or malignant fevers the urine is alkaline, when passed, and contains a great quantity of free ammonia and less urea than healthy urine; and in the plague and small pox, bloody urine is esteemed an almost fatal sign.

When the viscera of the thorax are inflamed, the urine is almost invariably high coloured. It is also high coloured in hectic fever, and continues to deposit a lateritious sediment without any abatement of the febrile symptoms.

Mr. Rose found the urine in hepatitis to be void of urea, and Dr. Henry that in chronic hepatitis to be free from colour and odour. In the latter instance, as the patient recovered, the urea was gradually restored. Dr. Osborne's experience does not confirm these observations.

"In the hepatic patients, which" (whom) "I have seen, the urine had a high colour, proportionate to the degree of fever which existed; and I rather suspect that the urine described by Dr. Henry, must have been occasioned by the inflammation having extended to the kidneys. However, this subject must remain undecided, till more numerous and decisive observations are obtained." P. 60.

Glands in a state of inflammation cannot well perform their functions: hence the urine discharged during nephritis, is described by some of the systematic authors to be scanty and pale. Most frequently it appears red, and more or less turbid, from small quantities of blood emitted by the renal capillaries; or from a coagulum formed in the bladder, which occasions remarkable appearances, described and explained by Sir Everard Home, in the Philosophical Transactions for 1797. When suppuration ensues, there is a purulent discharge with the urine, which is turbid, emits a peculiar fœtor, and deposits a milky sediment; and in gangrene, the evacuation has been observed high coloured and turbid. The different terminations of nephritis, however, cannot be determined entirely by the discharge from the urinary organs.

By numerous experiments it has been proved that, during a fit of the gout, the urine contains an increased quantity of phosphoric acid; its specific gravity is augmented, ranging from 1025 to 1040; and in the urea there is a proportional increment. The fluid is less abundant, and of a deeper colour than usual; and on cooling, deposits the pink or lateritious sediment.

An examination of the urine in dropsical diseases is of the highest importance. Mr. Cruickshank appears to have been the first, who noticed its coagulation on the application of heat or nitric acid. Dr. Rollo also found that the urine in acute rheumatism is coagulable. This subject has of late received particular attention from Dr. Blackhall, who observes, that coagulable urine attends universal dropsy, and is often superadded to great visceral unsoundness. He states that when the urine is most loaded, it coagulates by the lowest heat, and with the greatest firmness; while the blood is always found the most buffy, and the system exhibits the strongest marks of inflammation. Dr. Osborne thinks that Dr. Blackhall's enumeration of cases of uncoagulable urine affords no positive information, as the urine appears not to have been tried by nitric acid as well as by heat. Dr. Wells attributes the failure of the latter test, when nitric acid afterward succeeds in producing coagulation, to a deficiency of salts in the urine. Any neutral salts being added to serum coagulable only by nitric acid, a coagulation will be produced on the application of heat. Dr. Wells's analysis of dropsical urine shows that diffused dropsy, when not preceded by some debilitating disease, is generally accompanied by coagulable urine; and that encysted dropsy and ascites are most frequently not so accompanied; and it also tends to confirm the assertion of Cruickshank, that in the dropsy proceeding from unsound viscera, the urine is usually uncoagulable. M. Nysten remarks that, in general, when dropsical patients pass as much urine as equals in quantity that of their beverage, and when diuretics begin to take effect, the fluid discharged differs very little from natural urine. In the commencement of hydrocephalus some have observed milky urine, and it is stated by Dr. Coindet, that in the second stage a micacious deposition occurs, resembling the crystals of boracic acid, which he believes to be urea, and regards as an appearance peculiar to the disease.

The saccharine matter, obtained from the urine in paruria mellita (diabetes) is discovered not only by its sensible qualities, but by the effects produced on it by nitric acid, and by the production of alcohol from it, in almost the same

proportion as from sugar by means of fermentation and distillation. Its specific gravity ranges from 1028 to 1040, and in one patient, who died, we found it to be 1045. The formation of sugar nearly supersedes that of urea; but the other salts exist in the same proportion to each other as in health. In one of our patients, who died of what Dr. Rollo denominated cœliac diabetes, at the beginning of his disease, when the blood was highly inflammatory, and only two scruples of saccharine matter were produced by evaporating four ounces of his urine, coagulation took place; but when we endeavoured towards the decline of the disease to obtain this result, we could not succeed. Dr. Bostock analyzed the urine in one case of diabetes insipidus, and obtained no sugar; but the urea and the salts of urine were in such excess, that six ounces of urea, and above an ounce and a half of salts more than the natural quantity, must have been discharged daily.

Nervous urine, such as is voided by hysterical and hypochondriac patients, loses most of the colouring matter, contains more urea and uric acid, than urine emitted soon after drink, but not so much as digested urine. Similar urine is passed in spasmodic diseases.

The urine is of a yellow or greenish yellow colour in jaundice, and has been proved by Orfila and others to contain bile. Muriatic acid is a good test of the presence of bile in the urine: in a short time a small quantity produces with it a green colour.

The urine of children afflicted with worms is generally observed to become milky soon after it has been voided. According to Fourcroy, its sediment exhibits all the properties of oxalate of lime.

In rickety children the urine has been proved to contain much phosphate of lime, although it was found to be deficient in the bones of those, whose urine was examined. Both worms and rickets we suspect are preceded and accompanied by functional disorders in the chylopoietic viscera, which has the effect of suspending the process of ossification.* That disease of structure is not essential to interrupt the formation or deposition of phosphate of lime is probable; because in one rickety child we found all the abdominal viscera perfectly sound, the glands of the mesentery in particular; and in another, whose bony fabric was unaffected by disease, the whole of the abdominal viscera, excepting

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* See a Practical Treatise on the Remittent Fever of Infants, &c. By J. M. Coley. Underwood and Co. London, 1813. Page 163.

the alimentary canal and the urinary organs, were obliterated by the tubercular disease described by Dr. Baron. Not a vestige of the liver, pancreas, or spleen, was to be found.

An oily film is to be seen on the urine in various dyspeptic complaints, which Dr. Osborne thinks appears to be derived from a depraved secretion of mucus, and deposits an abundance of the earthy phosphates. These appearances usually cease after the use of purgatives, and seem to be closely connected with the state of the bowels. Those who lead a sedentary or inactive life, in universities and similar situations, are most subject to the disease. Considerable irritation is apt to be felt at the neck of the bladder, attended with a frequent desire to make water, which are both relieved by muriatic acid.

An excellent and useful table of urinary calculi, representing their sensible and chymical properties, comparative frequency, &c. conclude the pamphlet.

Notwithstanding we have been presented with many chymical and pathological researches concerning the urine, the science of uriology is still in its infancy. If Dr. Osborne has not made any discovery in this department, he has facilitated the study of it, and rendered it more inviting; and while we commend him for laying a foundation with materials ready prepared by others, we hope to see the structure enriched by his own workmanship.

Having often observed the symptoms of gravel attended with a discharge of crystals of uric acid, after the potation of stale beer, which did not impart any sensible acidity to the taste, we were induced, while reading Dr. Osborne's work, to make a few experiments with the view of ascertaining the cause of the formation of this acid in excess. To twelve ounces of healthy urine we added three of stale beer, of the kind above stated. In twenty-four and forty-eight hours no change had taken place; but in seventy-two hours a small quantity of very minute crystals of uric acid were deposited at the bottom of the vessel. Carbonate of soda being added to another portion of the beer, small bubbles of carbonic acid were seen slowly to ascend. From these experiments it is evident that the acetic acid in the beer has the effect of disengaging the uric acid from the substance with which it was united, by the power of a superior affinity; but we apprehend that this process does not take place in those persons from drinking stale beer, whose digestive powers are strong.

III.

Outlines of Midwifery, developing its Principles and Practice; with Twelve Lithographic Engravings. By J. T. CONQUEST, M.D. F.L.S. Member of the Royal College of Physicians of London; Physician-Accoucheur to the City of London Lying-in Institution, &c. One vol. small octavo, pp. 193, with twelve engravings, explanations, &c. London, December, 1820.

WITHIN these "Outlines," narrow as they are, there is compressed an astonishing mass of elementary and practical matter. Our author tells us, in his preface, that

"The following pages have been written under the abiding and powerful influence of the sagacious reply which was made by a Spartan king, who when asked, 'what is it in which youth ought to be instructed?' promptly answered, 'that which they have most need to practise when men.'" *Preface.*

Our author observes, that an outline of the principles and practice of modern midwifery, in a small compass, and to which reference might be easily made in the study or lying-in room, has been long wanting; and this has been his inducement to compile the present work.

"The work is avowedly an outline, and not a system; and consequently cannot be intended to supersede more laborious treatises. No lengthened details, contested points, or argumentative disquisitions, are admitted, because it aims at being plain and practical; and from a conviction that a remembrancer is not less useful and necessary than an instructer, it is intended as much for those who require to be reminded as informed. It labours to condense within very narrow limits a large quantity of useful knowledge; and to illustrate the subject of which it treats, rather by a rejection of what is useless, and which ought to be forgotten, than by solicitous inquiries after new materials, that it may be an acceptable compendium for students, or for those young practitioners whose engagements do not permit them to consult more voluminous publications. Still the author has striven not to omit any one really important principle or leading point of practice, which an accoucheur may require for his guidance when at the bed-side of his patient." P. vi.

The work is strictly obstetric, rejecting all irrelevancies, yet embracing every essential circumstance that can come under the cognizance of a medical man, while conducting a woman through the interesting process of utero-gestation and parturition.

So condensed an elementary and practical work admits of no attempt at analysis; and therefore we can only extract

a few passages, and present a few specimens of the matter and manner.

Our first extract shall be from the section on *protracted labours;* and we fear our author, even in these enlightened days, has not much overcharged his sketches.

"Within the whole range of obstetric science, there is nothing which so much distinguishes the judicious practitioner from the man who disgraces medicine, as the management of *protracted labours.* One man, by incessant meddling, produces rigidity of parts, and even inflames the os uteri so that his patient through his folly shall suffer from a most painful and protracted labour.

"Another, officiously interferes with the beautifully simple and admirably adapted process of nature; and presumes that, by rupturing the membranes as soon as he can detect them, or by using his lever on lever principles, by which many women are rendered wretched for life, he shall accelerate parturition.

"A third, urges his patient to be constantly taking stimulants, such as wine and spirits; or to employ voluntary exertion, under the *cant terms* of holding in her breath and forcing down; whilst the os uteri is not dilated half enough to permit the head to be forced through, and the consequence is, that the woman becomes so exhausted by useless exertions, that she at last has not power enough to expel the child, and instruments must be had recourse to.

"Another practitioner allows the head to remain through hours and days of laborious parturition in a position which will never permit it to pass through the pelvis, until the mother is worn out by fruitless efforts; though the malposition might have been rectified at the commencement of labour without difficulty.

"A fifth, is altogether unconcerned about the condition of parts, until the head has been so long, and so firmly wedged in the superior aperture of the pelvis, that mortification follows.

"To complete this mournful series of portraits, every one of which is drawn from a living character, *another*, instead of waiting for uterine action to throw off the placenta, will pull at the funis as at a cart rope, until the uterus is inverted, or formidable hemorrhage follows; and when, as a consequence of his meddling, the uterus is filled with coagulated blood, and it strives to empty itself by strong contractions, which are called after-pains, he will strive to counteract the salutary operation, by exhibiting large doses of opium to quiet these pains, which are intended to repair the mischief he had himself produced. These sketches have not one shade too deep, and they are but a sample of those practical evils, which are of almost every day occurrence." 77.

We observe at page 167, that Dr. Conquest speaks in high terms of the long forceps, as an "invaluable instrument," "but little known and much less estimated, or it would be employed by accoucheurs as a most important substitute for the perforator and crotchet, in many of those cases in which children are now destroyed."

"This instrument is principally applicable,

"*First*, to those cases of deformity at the brim of the pelvis, in which the diminished capacity of the pelvis is from sacrum to pubes, and yet so slight, that a little power beyond what the uterus can employ, would expel living children, which are now almost universally sacrificed at the shrine of prejudice. It is applicable,

"*Secondly*, to those cases of hæmorrhage, convulsions, &c, in which the head of the child is resting on the superior aperture of the pelvis, and in which delivery being essential to the well-doing of the mother, is now usually effected by opening the head of the child.

"The *long forceps* in contradistinction to the *short ones*, aré to be applied over the occiput and face of the child, so that the convex edges of the blades may correspond to the concavity of the sacrum.

"When used, the power may be exerted laterally, or from side to side, with moderate traction, remembering that the axis of the brim of the pelvis requires the handles to be kept backwards towards the os coccygis, but as the head descends, its most favourable position in relation to the pelvis must be secured.

"It has been extremely gratifying to *myself and to several highly esteemed friends*, to have been by this means instrumental already in rescuing not a few children whose heads had been condemned to be opened." 108.

The preferable mode of procuring premature labour, where that event is desirable, consists, our author states, in gently carrying the forefinger of the left hand through the os uteri, and then passing it round and round within the os and cervix uteri, so as to detach the *decidua*. By this mode the membranes are left entire, so that the fœtus cannot be destroyed by pressure, (as is the case where the membranes are ruptured,) and the mouth of the womb and vagina are gradually dilated by the protrusion of the liquor amnii performing its wedge-like office, as in natural labour. Parturition usually commences in from twenty-four to ninety-six hours, and the management of the case depends on the nature of the presentation.

On the subject of spontaneous evolution of the fœtus, our author thinks that it is rather "a doubling of the fœtus, so that the arm changes its situation but very little, perhaps not at all, whilst the nates are forcibly expelled before the upper extremity." Our readers will see that this corresponds with Dr. Gooch's ideas, in our last number.

The section on uterine hæmorrhage contains a great mass of important, judicious, and valuable matter. We must close this article with the following extract:—

"The exhibition of very large doses of *opium*, to restrain uterine hæmorrhage, has been recommended by several deservedly eminent accoucheurs.

"Both reason and experience appear to concur in condemning

this practice ; for whilst it is admitted that under some circumstances opium is highly beneficial, its indiscriminate employment is undoubtedly fraught with mischief.

" The result of calm and dispassionate investigation on this subject is, that opium in large doses, in cases of uterine hæmorrhage, generally does harm, by paralyzing the contractile energies of the uterine and arterial fibres ; and that this valuable medicine is useful, and only useful under the existence of some such circumstances as the following :

" It is decidedly beneficial, when hæmorrhage has gone on until the vital powers have become reduced extremely low ; and when, with other symptoms of exhaustion, the stomach manifests great irritability.

" It is no less valuable an agent, when hæmorrhage is the consequence of irregular contraction of the uterine fibres, whether of the circular or longitudinal.

" In either of these cases, it is a very efficacious article of the materia medica ; but it appears most dangerous to attempt to maintain its utility, or to rely on its efficacy in cases of active and alarming uterine hæmorrhage.

" When exhibited under the before-mentioned circumstances, to secure its full effect, it is necessary to give it in doses of four or five grains, repeating it every second or third hour whilst necessary, with a diminution of one grain from each successive dose." 169.

The foregoing extracts do not do justice to the little volume before us ; and any attempt at a regular analytical delineation would be doing it a still greater injustice. We remember well the time when, in the early years of our obstetric practice, we should have considered this pocket reference, on puzzling occasions, in the lying-in room, a most welcome treat. As such we recommend it to the young practitioner ; while to the more experienced accoucheur it will prove a useful remembrancer.

ARTERIAL INFLAMMATION.

IV.

1. *Quelques Observations pour servir à l' Histoire de l' Arterite, ou Inflammation des Artères.* Par M. DALBANT, a Paris. Juillet, 1819.
2. M. VAIDY *in Journal Complimentaire.* Août, 1819.
3. M. VAIDY *in Revue Medicale.* Mai, 1820.

INFLAMMATION is an abstract term employed in medical philosophy to express WHAT is generated in a living part by the influence of certain causes whose particular effects determine inordinate action in the nervous and vascular organs of that part. This WHAT is not an *entity*, a *thing*, because

it does not exist as an essential substance: it is a *condition, a state*, because it consists in the external qualities of the living part which is its seat; and it is a *morbid state*, because it depends on the presence of new and unnatural or unhealthy accidental differences introduced into the external qualities of the part, by whatever agent may be their determinative cause. Inflammation, then, is a morbid state, a disease, dependent on the circumstances of organic matter; and, consequently, is not peculiar to the human race. Animals, throughout all their tribes, are exposed to suffer from any of the modifications which its varieties may assume. Being thus uninfluenced by the conditions of man's intellectual nature, its manifestations appear only in the derangements of his vital actions, and his organic structure alone can become the subject of those phenomena which attend the developement of inflammatory disease.

Vascular inflammation is produced by those causes which determine irregular action in the nerves and *vasa vasorum*, or vessels whose function is to supply and maintain the structural elements of the lymphatic and sanguiferous organs. Our present researches, however, shall be restricted to an investigation of the distinctive forms, and their pathology, as existing in a morbid state of the *arterial* tubes.

Arteries, being composed of the elementary principles peculiar to all the diversities of animal structure, are consequently exposed to the same morbid changes in their vital actions. Inflammation of these vessels, previously to the time of those authors, from whose writings, and the records of our own experience, we propose to select the materials of this article, had been as unfrequently noted as it was imperfectly described. We shall, therefore, be somewhat particular in our endeavours to illustrate its causes, nature, and influences; hoping that these our labours may, in some degree, contribute to the better understanding of an untractable disease.

I. Etiology. Arteritis may be modified, in its nature and degree, by a variety of causes which predispose the arterial textures to become the seat of inflammatory action. Among the *predisponent causes* may be enumerated—the plethoric idiosyncracy—indulgence in the use of rich foods and drinks —influences of climate—effects of inflammatory and febrile affections—suppression of established periodical or permanent discharges, especially the sanguineous—reiterated paroxysms of convulsive, spasmodic, and other nervous diseases—unrestrained sway of the irascible passions—intemperate and luxurious habits of all kinds, particularly such as

possess a tendency to induce or confirm an excess of action in the chylopoietic and sanguiferous vessels.

Arterial inflammation is often complicated with other organic diseases; and, not unfrequently, it arises from causes whose progressive operation cannot be retraced. It may be determined by compression, insolation, congelation—by punctured, incised, contused, and lacerated wounds, originating from chirurgical or traumatic agency—by vital exhaustion, mental agitation, violent and forcible exertion, atmospherical vicissitudes—by the mechanical or chymical effects of extraneous substances, solid, fluid, or gazeous—by contact of other morbid organs—and by many of the exciting causes from which particular inflammations proceed.

II. Symptomatology. Arterial inflammation often completes an insidious and fatal course without its existence being ever indicated by the presence of one distinctive sign. The traces of its ravages, in such instances, remain for ever unknown, or, by the researches of pathological anatomy, are incidentally detailed and explained. Our own limited observation inclines us to conclude, that its origin and formation are many times obscured by the indefinite nature of its symptomatic effects. Sometimes, especially when its determining causes escape notice, its symptoms are indistinguishable from those by which the fever, called *synochal*, is accompanied: in other cases, they differ little from those connected with sub-acute or chronic inflammation of the larger abdominal and thoracic organs. When the disease, however, resigns the latent, and assumes a manifest, character, its progress is not different, and its symptoms vary not, from those which mark it when consecutive to an ascertainable or violent cause.

Early in the disease, if its developement is not sudden, the patient is restless, impatient, watchful, irritable: he experiences partial flushings, which gradually increase both in frequency and extent: his bowels are inactive, but his pulse is imperceptibly affected. By and by, he complains of a deep-seated pain in some part of the abdominal or thoracic regions, and seldom fails to describe it as being hot, lancinating, spasmodic, and increased by slight exertion. Disturbance of the vascular system now supervenes: respiration is accelerated, and the breath feels offensive from its heat. The mouth, however, remains humid, the tongue red, the lips moist and natural. Rigours at last are felt; and, as the disease advances, the internal pain becomes more diffused. The original flushings give place to a true febrile

state of the cutaneous surface, and the disquietude is succeeded by headach, nausea, languor, and depression. Inappetency and quenchless thirst prevail. The bowels are more obstinate; the mouth tastes bitter. The pulse, in some instances, is hard, strong, and tumultuous; in others, wiry and irregular. If transient sleep is obtained, it is unrefreshing and interrupted by startings and frightful dreams. About this time cough begins. This, sometimes, is dry, frequent, teazing; sometimes it recurs in violent and tedious paroxysms, and is accompanied with expectoration of fetid mucus, the clots of which are occasionally streaked with florid blood. When the disease has, at length, acquired a formidable ascendancy, all its previous symptoms, and the symptomatic fever, (which is generally the synochal or inflammatory,) are greatly aggravated. The patient's countenance suddenly shrinks, becomes pallid, haggard, cadaverous. His strength sinks; his emaciation is extreme. His lips are crimson or livid; his tongue red, smooth, moist. At the same time his breathing is rapid, difficult, irregular; the headach intense; the pulse hard, labouring, intermittent, accelerated to 110—130. Consecutive to the former deep, internal pain, a distressful sense of constriction, most frequently in the cardiac, præcordial, or epigastric region, is established. Spasms not unlike those of tetanus, in many cases, occur under the xyphoid cartilage, and in the line of the diaphragm. The countenance and extremities grow œdematous. Forcible palpitations of the heart, and, in some instances, of the abdominal aorta, so as to be distinctly felt through the integuments, now predominate. The arteries pulsate with alarming and painful violence, and the action of the more superficial is quite visible: that of the carotids is audible by the patient himself, often by his attendants. Syncopé is frequent; the paroxysms of dyspnœa protracted and agonizing. The anasarcous effusion extends and becomes general. In many cases ascites supervenes; in others, hydrothorax; in some, the extravasation of serum is universal and profuse. Orthopnœa succeeds, and the patient is confined to a sitting posture. The least motion excites cough, and a sense of instant suffocation. Wheals and ecchymosed patches arise in different parts of his body. Violent convulsions ensue; and, in one of these, exhausted already and moribund, he struggles and expires.

Such, we believe, is not an unfaithful representation of the stages through which the inflammation of arteries pursues its fatal course. Which of all these symptoms, then, shall we regard as distinguishing it from the other diseases to which, by general similarity of character, it may seem to be

allied? Until numerous and diversified observations in clinical practice and anatomical pathology shall have farther enlarged our knowledge of the malady, many circumstances will continue to embarrass any attempt towards delineating the symptoms which specificate the arterial from the other acute inflammations which it more intimately resembles. Without going into minute ratiocination on the subject, therefore, we would beg to submit the following practical aphorisms:—1st. That, when the leading symptoms we have just now enumerated do appear, they indicate the existence of inflammatory disease: 2d. That, when the heat and pain, attendant on internal inflammations, cease to be concentrated, this circumstance, connected with the preceding, may suggest the inflammation of some organ whose functions are diffusive, and exercise an extensive influence over the state of the general system: 3d. That, when superinduced to these, the arterial disturbance peculiar to all inflammations is propagated, in an exquisite degree, from the large to the smaller vessels, so as to excite a visible and almost audible impetuosity of action in their superficial ramifications, no error of practice can be imputable to the physician who shall regard the case as one of acute arterial inflammation, and forthwith institute, for its removal, the agency of a vigorous and appropriate treatment.

Arteritis requires, of course, the general treatment adapted to reduce the inflammatory state, in whatever department of the animal economy that state may arise. The peculiar symptoms of the disease may be advantageously combated, we doubt not, by the modified use of such therapeutic agents as are known to contribute to the reduction of inordinate action in the vascular system. More than this, in the present state of our knowledge, we do not deem it wise to advance. We have no theory and few facts to guide us in the investigation, and cannot, therefore, perceive advantage in bestowing, on this branch of the subject, the trouble of an elaborate detail.

III. Pathology. Some idea of the existence and influences of arterial inflammation seems to have been entertained by Aretæus, whose bold and depletory practices are followed and improved by the best physicians of modern times. His words are, speaking of affections of the vena cava—

"Quibusdam, et arteria secundum dorsum inflammatur; quod pulsatio in alteris præcordiis manifestat: nam et ipsa venæ cavæ morborum particeps efficitur juxta illam in sinistro latere posita; ****** somni tumultuosi fiunt; alvus quibusdam nihil reddit, quibusdam exiguum, acre, biliosum, &c." *Lib.* ii. *cap.* viii.

Detached notices of the organic lesions affected by arterial inflammation are also scattered through the writings of subsequent observers; but, being unaccompanied by any description of the pathetic* symptoms, they all are as defective as they are unsatisfactory. The disease and its results, however, did not altogether escape the inquisitive hand of Morgagni, to whose venerable pages the following history has been consigned.

Case.—*Pathology.* "A sexagenarian, who had formerly been syphilitic, was afflicted with rheumatism which, about fifteen years afterward, yielded to an artificial perspiration. Subsequently, he became corpulent and liable to paroxysms of dry cough, with difficulty of breathing, especially on taking food. In other respects he seemed healthy and robust, but latterly complained of confusion in his head. At last, immediately after taking a spare supper, this man was suddenly seized with a slight cough, which rapidly increased. He became convulsed, and died instantly; emitting a frothy and sanguinolent fluid from his nostrils and mouth.

"*Necrotomy.*† Externally, the sides of the thorax and the countenance were red and livid. Both internally and externally, the lungs were liver-coloured and softened. Each of them adhered to the sternal pleura, the left to all the contiguous parts. In each of the thoracic cavities and the pericardium was a large quantity of bloody serum. Both ventricles, as well as auricles of the heart, were empty; its structure sound; its valves and large vessels natural. The caliber of the aorta, from its origin to its arch, was dilated; and over its internal surface, many white spots were interspersed. "*Et, quod mihi præcipuum visum est, colore ex atro rubens*‡ *ut si inflammatione quâdam esset affecta.*" Beyond the arch,

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* Pathetic. This term has been carried away from the province of medical philology, to which it naturally belongs. By the Greeks, from whose comprehensive language it is derived, the word νοσος was employed to denominate a particular disease, while, by παθος, disease in general, on a diseased state, was emphatically expressed. *Pathetic*, in the text, signifies *pertaining to disease, arising from disease, denoting disease;* and the *pathetic symptoms* are those by which we are apprized of *the morbid state*. We submit the propriety of reclaiming this epithet for the use of pathological science.

† *Necrotomy.* We venture to employ this word in the room of *post mortem appearances*, and other incongruous expressions which deform our medical style. It is constructed on principles strictly analogous to those of the English language; and, being derived from Νεκρος, *cadaver ipsum, a corpse, a dead body;* and Τομη. *section, incision, dissection;* is equivalent to the Latin *sectio cadaveris*, and literally signifies *the dissection of a dead body;* which is more appropriate than *autopsia*, which only signifies inspecting, viewing, contemplating by one's self.

‡ Boerhaave discovered in a bullock "qui vehementissimo cursu aufugerat," the aorta "ut esset *nigerrima*." The same distinguished pathologist ranks "inflammatio arteriosa" among the causes of an intermittent pulse *Institutionum Medicinæ*, Sect. 827.

at the origin of the innominata, and where the aorta descends near the vertebræ, a few of these spots were also found. The vessels of the pia mater were distended with blood: the lateral ventricles contained a little bloody serum. Every other part of the cerebrum, cerebellum, and medulla oblongata, was perfectly natural. The abdomen was not examined."*

Morgagni, in remarking on the peculiar features of this case, does not deny the possibility of the cough, convulsions, and suffocation, having proceeded from an invisible cause latent in some nervous ganglion, but feels disposed to regard inflammation of the aorta, whether connected or unconnected with the cough and convulsions, as a chief cause of the patient's death.

Schmuck, in 1794, published an essay† on the inflammation of blood-vessels; and, in 1797, was followed in the same path of research by Saase,‡ who superadded to his own all the practical observations of his predecessor, together with a number which Meckel communicated to him, in illustration of his subject. This writer made a variety of experiments, by which he introduced different chymical irritants into the cavities of blood-vessels, and uniformly found the result to be, the formation of false membranes or obliteration of the vessels by clots of coagulable lymph. Subsequently, an analytical translation of the more useful parts of Saase's dissertation was made by Schwilqué, whose memoir§ also contains a summary of the facts advanced by previous authors, with the design of establishing their particular views of the nature of vascular inflammation. The combined testimony of all these facts is submitted as evidence—that many points of the internal face of veins and arteries may be inflamed—that no person has ever seen all the blood-vessels affected at the same time with inflammation—that veins are more frequently inflamed than arteries—that, whatever be the lesioned vessel, inflammation is *in general* seated in its internal membrane, *sometimes* in the external, and *may extend* itself to the contiguous parts—and that vascular inflammation may terminate in suppuration, in the formation of false membranes, or in thickening of the part in which it acts.

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* J. P. Morgagni de Sedibus et Causis Morborum. Epist. xxvi. Art. 35, 36. Tom. II. p. 284, 285.

† Dissertatio Sistens Obs. Med. de Vasor. Sanguif. Inflammatione, Heidelbergi. 1794.

‡ Dissertatio de Vasorum Sanguiferorum Inflammatione. Hallæ, 1797.

§ Faite pour servir à l'Histoire des Inflammations Veineuses et Artérielles, insérée dans la Bibliothèque Medicale. Tome xv.

Inflammation of an artery from the application of a ligature is sometimes propagated along the vessel's internal membrane, to a considerable extent. Œhme* discovered this state of the epigastric artery consequent on ligature of the umbilical cord. After ligature of the femoral artery for aneurism, Mr. Cline† and Mr. Abernethy‡ found traces of inflammation over all the course of that vessel, and of the aorta to its origin in the heart.

Portal, alike venerable for his age and his usefulness, could not in the multitude of his dissections avoid having detected the particular lesions determined by inflammation of the arterial coats. Accordingly, we find him stating,§ as a pathological fact, that blood-vessels are susceptible of inflammatory action, and, at the same time, illustrating this doctrine by the outline of a case which came under his own observation. "Few authors," he says, "have treated of aortal inflammation: I have often discovered traces of it in subjects with the history of whose diseases I was unacquainted; and I am now satisfied of its existence by what I saw in a young man whose body I myself inspected."— This person died of a few days illness, induced by sudden retrocession of measles. His chief symptoms were an exquisite sense of suffocation and violent palpitations of the heart. After death his lungs were found distended with air, condensed and rubicund. The aorta, in nearly all its extent, was bright red, its parietes tumid and softened, especially within the thorax and near the diaphragm, where it was covered with varicose vessels. Its internal coat was thickened and softened. Portal, in fine, declares that there can be no doubt of the existence of aortal inflammation, and that it is always accompanied by a convulsive cough, extreme difficulty of breathing, and forcible palpitations‖ of the heart, terminating in sudden death.

Dr. Frank, of Vienna, assumes to himself the credit of having been the first to observe and describe the phenomena

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* Dissertatio de Morbis recens Natorum Infantum Chirurgica. Lipsiæ, 1773.

† Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, Vol. I. p. 171. London, 1793.

‡ Surgical Observations, first edition, Part IV. p. 232.

§ Cours d'Anatomie Medicale, Tome III. p. 127, 128. A Paris, 1803.

‖ Landré Beauvais declares palpitations to be constant accompaniments of organic lesion of the heart and large blood-vessels. Séméiotique, ou Traité des Signes des Maladies, p. 59. A Paris, 1813.

of vascular inflammation, originating from indeterminate causes. He found it in many cases of inflammatory fever, and told Corvisart,* in 1809, that he had then detected traces of aortal inflammation in nineteen subjects who had died with febrile symptoms, of the most malignant kind. He considers it to be the cause of a particular fever which has hitherto always proved fatal; and, with reference to his knowledge of this fact, he chooses to employ these assertive terms.† "*Venarum totam compagem internâ superficie undique profundé rubentes ac inflammatas nos primùm conspeximus, similesque arteriæ imprimis phlogoses partiales sub eidem circumstantiis, jam pluries ostendimus.*"

Corvisart,‡ in his pathological researches, frequently observed a redness of the inner aortal coat. This redness he describes as being more or less deep, various in its extent, but unaccompanied with any thickening of the membrane wherein it appears. He professes himself, at the same time, unable to offer any explanation of the nature and cause of this phenomenon. Mr. Hodgson, however, with his characteristic modesty, refers its developement to other than an inflammatory cause. We find ourselves induced to bring his sentiments under the consideration of our readers in his own words.

"The internal surface of arteries," says Mr. H. "often exhibits a red appearance, which does not arise from acute inflammation. The internal coat is of a deep scarlet colour, sometimes throughout the whole extent of the system; and on other occasions, this appearance is to be observed only in circumscribed patches. It is attended with do deposition of lymph, or thickening of the vessel; and, if the internal coat be removed, the middle generally presents its natural appearance; whereas, in the cases of acute inflammation which I have examined, the middle coat has always exhibited a preternatural degree of vascularity. This red appearance of the internal surface of an artery is often observed in the vicinity of coagula, and in those instances may probably be the effect of transudation after death. But I have very frequently remarked it where no coagulum has been found in the vessel, and it is generally to be observed in arteries that have been long exposed to the air in a dissecting room. I have, however, seen it in subjects that have been inspected a very few hours after death, and cannot therefore regard it as produced merely by exposure to the air. Whether it is to be considered as a change which takes place after death, or as a morbid appearance, I am unable to determine."§

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* Essai sur les Maladies du Cœur, p. 351.
† De Curandis Hominum Morbis.
‡ Essai sur les Maladies du Cœur et des Gros Vaisseaux, p. 350.
§ Treatise on the Diseases of Arteries and Veins, 1815, p. 7, 8.

According to Mr. Hodgson, the internal coat of an artery bears a striking analogy to serous membranes, especially in its tendency to assume the adhesive inflammation. He has occasionally met with such a state of the great blood-vessels in acute inflammations of the thoracic organs. In one case, he says, p. 6, "the aorta was throughout of a deep scarlet colour; the posterior mediastinum was gorged with serum, and a little above the semilunar valves, the cellular membrane that connects the coats of the aorta was distended with lymph."

We transcribe from his interesting pages a case of pneumonic inflammation, in which the disease had also affected the internal coat of the aorta, and produced an accretion of organizable lymph on its surface.

"A man," p. 5, "who had recently returned from Jamaica, where he had been severely afflicted with dysentery, was attacked with violent pneumonia, which destroyed him in the course of a few days. The cavities of the pleura were found to contain much lymph and serum. The pericardium was covered with lymph. The cells of the lungs were filled with bloody serum, and the bronchia were highly inflamed. All the thoracic viscera exhibited the effects of the highest degree of acute inflammation, which had extended also to the aorta, the inner coat of which was of a deep red colour, and a considerable effusion of lymph had taken place into its cavity. The effused lymph was very intimately connected with the internal coat of the vessel, and a plug of it had extended into the left subclavian artery, and nearly obliterated the cavity of that vessel."

Dr. Patissier,* in dissecting a subject who died of tetanus, discovered traces of inflammation in the heart and large blood-vessels, both venous and arterial. Their inner coat exhibited a bright red colour, which became paler in proportion to the distance of parts from the heart. We ourselves, in January, 1820, inspected the body of an athletic young man, who was killed by the spasms of traumatic tetanus; and, in his case, we found the venous and arterial systems deeply implicated in the disease. The internal membrane of the large veins and of the anterior cardiac cavities, was purple in colour, thickened, disorganized, and easily lacerable: that of the aorta and posterior cardiac cavities, was bright scarlet, but without thickening, and possessed of its natural tenacity. We would suggest to pathologists the propriety of making the state of the vascular system, in all cases of fatal tetanus, the subject of patient and scrutinous research.

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* Bulletin de la Faculté de Médicine de Paris, No. X. 1816.

One of the most important cases of the disease under consideration, we detailed in our third number, page 502, to which we refer. Dr. Kennedy, of Dunning, we are informed, treated four cases of arteritis complicated with visceral inflammation. We shall introduce one of these in the Doctor's own words.

"Case.—*Pathology.* A. B. a farmer, aged forty-six years, came under my care in July, 1815, with acute pneumonia induced, he said, by exposure in a wet dress to the nocturnal air. His symptoms were urgent, and had existed, in a severe degree, nearly three days. By three venesections, performed at short intervals, he lost sixty ounces of blood, and these depletions, with the assistance of a large blister, active purging, a few liberal doses of calomel and opium, and a suitable regimen, restored him in due time to his former health.

"This man was regular in his habits, but indued with an ardent temperament, corpulent, and remarkably obnoxious to the recurrence of thoracic inflammation. Twice in 1816, he experienced an attack of the disease, and was relieved by modifications of its original treatment.

"In spring, 1817, he was with difficulty saved from falling a victim to its violence, by the employment of free depletion, vascular and alvine, together with counter-irritants, expectorants, and a diversity of the means usually administered for the purpose of rebalancing the vital actions. Ever after this attack, he was haunted by a hard cough. He experienced a constant sense of weight and fulness in his chest; his breathing was never free, and these symptoms were, at all times, aggravated by exposure to a foggy atmosphere or the air of night.

"Having incautiously reclined upon the ground, after being heated in harvest of that year, he became very ill in the evening, and passed an irksome night. Next day at noon, I found him speechless, panting for breath, and exhibiting many signs of impendent apoplexy. His jugular vein being instantly opened, forty-five ounces of blood were allowed to flow before he expressed a sense of relief. This was followed by a brisk purgative, and a blister over all the chest. Being aware of an approaching exacerbation, in the evening, he requested to lose blood, and twenty ounces were abstracted from his arm. His bowels having been freely evacuated, a scruple of calomel, and two grains of opium were now administered, and his attendants enjoined to promote their operation with a full dose of castor oil in the morning. Under such treatment, his complaint proceeded favourably till the fourth day, when he unexpectedly began to complain of a burning pain, flashing, as it were, along the internal surface of his chest. Towards evening, all his worst symptoms returned, and at midnight, I found him afflicted by his disease in an exquisite form. He seemed exposed to instant suffocation. His face was purple, his lips livid, his eyes fixed, prominent, and vascular. All his pulses were strong, and throbbed with extreme violence. The action of his carotid and temporal arteries was visible. They beat 120 times in a minute, and their pulsations were not regular.

"Bleeding to a large extent, at this time, gave him only a transient relief. It was repeated, and unavailably assisted during the three subsequent days with every means that could be devised. The disease gathered strength as it advanced. When able to speak, the patient described the sensation in his thorax, as if it were filled with hot water. Various parts of his body were pained and disfigured by diffuse groupes of subcutaneous tubercles, which felt hard and deep-seated. Two large vesications had arisen on the calf of his right leg; they were distended with a dark sanguiniform fluid, opaque, and thicker than common lymph. His vital powers sunk fast; palpitations of the heart ensued; frequent fainting followed; hiccup and convulsions supervened; and, with an agonizing struggle, but possessing his intellectual faculties unimpaired, my patient escaped from life and from suffering.

"Dissection *twenty hours after death.* Œdema nearly confined to the extremities. Another vesication similar to those observed, before death, on the right limb, was now discovered on the external aspect of the left thigh. Irregular patches of livid, disorganized textures appeared in different parts of the body and limbs; others were studded with clusters of subcutaneous tumours, various in size, firm, and round or longitudinal in form.

"*Abdomen.* With exception of slightly increased vascularity in some parts of the mesentery and duodenum, where it crosses the vertebral column, and in the peritonæal face of the diaphragm at its aortal aperture, the abdominal and pelvic organs retained no perceptible trace of disease. The spleen and pancreas, although much larger than is natural, were healthy. When incised, the vessels of the liver gave out a fluid little darker than arterial blood, but its structure seemed perfectly sound.

"*Thorax.* Several ounces of reddish-brown serum floated within the pleura, and the vessels of this membrane, especially those of its dorsal portions, were finely injected. An excess of ropy sanguinolent fluid distended the pericardium, which was thickened and inflamed. The heart's external surface was overspread with a thin layer of grumous matter, resembling, in colour and consistence, an admixture of pus and blood. Its ventricular valves and membranes, particularly the posterior, exhibited many patches of vascular network, some of which were purple and easily ruptured. Depositions of accretive lymph had been formed in several parts of the ascending aorta, whose inner coat presented a deep crimson line, which extended over the arch and carotids, but became fainter in the subclavian artery, as far as that vessel was traced. This vascular injection, occasionally interrupted by pellicles of effused lymph, was deep and distinct over all the internal membrane of the descending aorta and its chief divergent branches, to where it gives off the inferior mesenteric artery. Beyond this, it decreased and finally disappeared at the bifurcation of the aortal trunk. Similar traces of the disease were found in the corresponding thoracic and abdominal veins. Their redness, how-

ever, was combined with a brownish tinge, and clots of a viscid wine-coloured substance adhered to some parts of their inner coat, so as to contract the diameter of their tubes. Half an inch of the thoracic duct, at its junction with the venous system, was nearly obliterated by the thickening of its texture. Traces of recent inflammation were observed on the left division of the thoracic face of the diaphragm. The left lung was condensed and hepatized; the right gorged with frothy mucus. An incohesive layer of dark orange-coloured muculent matter lined the pneumo-gastric portion of the mucous membrane, which was soft and readily torn. Some of the internal thoracic surfaces were connected with each other by slight adhesive bands.

"*Encephalon.* Globules of a semidiaphonous fluid exuded on many parts of the dura mater, from the vessels which, in removing the calvaria, had been ruptured. Those of the pia mater were excessively injected and distinct. The arachnoid membrane was thickened and unusually resistent. Every where the meningeal vessels were turgid with blood, which issued from them when divided. Each of the ventricles contained much sanguinolent serum, and their surfaces had the velvety appearance peculiar to mucous membranes. No part of the cerebral or cerebellic organs was found in a diseased state; but, on their being incised, small beads of watery blood oozed from all parts of their structure."

We do not deem it necessary, at present, to enter into any description of the various morbid states in which arterial inflammation is prone to terminate. By inflammation of their textures, whether chronic, subacute, or acute, we regard the arterial vessels as being made liable to the deposition of organizable lymph on their internal surface; to obliteration, dilatation, disruption, and aneurism; to a cartilaginous, and steatomatous thickening of their inner coat; to the deposition of atheromatous, calcareous, and osseous matter in any part of their structure; and to become schirrous, cancerous, fungous, ulcerated, gangrenous, or sphacelated.

Arteritis is a subject which we should regret to see neglected. It is a disease, we conceive, of no unfrequent occurrence, particularly as a complication of fever and inflammation of internal parts. If the investigation be zealously and faithfully conducted, we would almost venture to predict that the *synochal state* will one day be regarded as symptomatic of arteritis, and the *typhoid* of phlebitis, the acute inflammation of veins.—To the latter form of disease we propose, in an early number of the Journal, to direct the attention of our readers; and, in the mean time, are willing to hope that the present sketch will not be devoid of interest or utility.

V.

1. *A Dissertation on the Treatment of Morbid Local Affections of Nerves: to which the Jacksonian Prize was adjudged by the Royal College of Surgeons.* By JOSEPH SWAN, Member of the Royal College of Surgeons, and Surgeon to the Lincoln County Hospital. One vol. 8vo. pp. 196, three plates. London, 1820.

"Non Scribo hoc temere. Quo minus familiaris sum, hoc sum ad investigandum curiosior." *Cicero.*

2. *Tentamen Medicum inaugurale de Neuralgia faciali Spasmodica.* By ROBERT MASTERS KERRISON, M.D. Licentiate of the Royal College of Physicians. Octavo, sewed, pp. 45. Edinburgh, 1820.

"Cognitis indiciis, quæ nos vel spe consolentur, vel metu terriant, adcurationes morborum, transeundum est." *Cels.*

3. *A Treatise on that painful Disease of the Face, called Tic Douloureux: including Practical Observations and Illustrations tending to point out not only a Plan of Prevention, but of* radical *Cure; with Formulæ of Prescription used successfully.* By G. H. VILLERS, Physician-Accoucheur, formerly a Surgeon in the Army. Octavo, pp. 34. London, 1821.

THE sentiment of the great Roman orator, expressed in Mr. Swan's motto, ought especially to actuate the medical philosopher; for, in no province of human knowledge is there greater scope for investigation than in that of medicine and its auxiliary branches. The anatomy of the nervous system, it is true, has been cultivated with considerable success by many eminent men of former and present times; but a dense cloud overhangs its physiology, and has hitherto veiled most of its laws in almost total obscurity. Of all the neurological theories that have been proposed, Mr. Swan is disposed to consider that one of the most rational which goes to the identity, or at least great similarity, of the nervous and electric fluids—a presumption, he thinks, greatly strengthened by the circumstance that the galvanic influence on the nerves of an animal apparently dead, will produce the same motions in the parts to which these nerves are distributed, that were produced in them when the animal was alive. Without questioning the considerable analogy which subsists between the nervous and galvanic fluids, we are disposed to view these experiments with some degree of scepticism. A needle pricking the muscle of a dead animal, will often cause it to contract, and we consider the galvanic

shocks thrown along the nerves of a dead animal, as only so many powerful stimuli, but not by any means identifying them with the fluid, or whatever it may be which is transmitted from the brain to the muscle in the living body. The fact of the torpedo and gymnotus electricus being able to communicate shocks to other animals is much more presumptive proof than the galvanic experiments; yet even here we are hardly authorized to infer similarity of cause from similarity of effect.

The strongest proof of the analogy in question has undoubtedly been drawn from the action of secretion being renewed and carried on by aid of galvanic influence, after the nerves going to the secretory organs have been divided. But these physiological disquisitions we shall leave to the many able experimenters who are now directing their investigations towards that important point.

The sanction of the Royal College of Surgeons, as evinced by the Jacksonian prize, is in itself a passport, for the work before us, to public patronage; but we believe that the analytical sketch which we shall forthwith present our readers, will not only accelerate the circulation of the work itself, but diffuse a knowledge of its valuable contents to an extent which it would not otherwise be likely to reach.

The work is divided into fifteen chapters, the contents of which we shall not enumerate here, as we shall dip, more or less deeply, into each as we pass along.

I. The first chapter is dedicated to diseases and injuries of the nerves of sense. These, our author remarks, do not seem to suffer much from injuries and diseases—or at least they do not excite so much constitutional disturbance as affections in other parts of the nervous system—yet, when once affected, they are less disposed to the restorative process than other nerves. The olfactory functions may be diminished or destroyed by the frequent application of strong odours, or by inflammation of the schneiderian membrane, or pressure on the origins of the nerves by hydatids, &c. In the case of inflammation, leeches to the exterior of the nose, cooling ointment to the interior of it, and purging medicines, are the proper means. A case is related of a man who complained of very violent pain in the forehead for many days, especially towards the right side of the crista galli, with complete loss of smell in the right nostril, that of the left remaining entire. He was bled copiously from the arm and temples, took antimonial powder with submuriate of mercury and sulphate of magnesia, besides being put on a strict regimen. By these means the pain gradually declined, and the sense of smell returned. The

functions of the olfactory, as of other nerves of sense, are sometimes so disordered as to produce unpleasant sensations, and that without any manifest cause, excepting that the functions of the stomach and associated organs are generally deranged. These functions restored, the sympathetic disorder generally ceases.

We shall pass over Mr. Swan's observations on affections of the optic nerves constituting amaurosis, since these are more fully treated of in our analysis of Mr. Travers's excellent volume.

In the following case our author had reason to suppose that there was a fracture of the base of the skull, that the petrous portion of the left temporal bone was much injured, and that the portio mollis of the seventh pair was destroyed. As the case is short, and rather interesting, we shall quote it.

"A man fell from a loaded wagon, and pitched on his head on the left parietal bone. A small wound was made, but this bone was not injured. Much blood flowed from the left ear, and a little from the right, and he became insensible. On being bled he became more sensible, but the next day he was again insensible. His pulse was eighty, and weak. Four grains of submuriate of mercury and purging medicines were given him. The third day he kept sleeping, but when roused appeared more sensible. The purging medicines had operated, and his pulse was seventy-two, and weak. Four grains of the antimonial powder and a saline draught were given every four hours. On the fifth day he became quite sensible, but had pain in his head, and was entirely deaf. On the seventh day the pain in his head had increased, his pulse was only fifty-four, and his cheeks were flushed. Six ounces of blood were taken from the arm, which relieved him. On the eighth day he continued better, though his pulse was only fifty-four. On the tenth day he kept mending, but when he attempted to walk, his legs appeared very weak. He continued entirely deaf. A great quantity of an aqueous fluid had kept constantly discharging from his left ear, and some from his right.

"On the second day after the accident the fluid was very much tinged with blood, but after that it kept gradually getting paler. On the tenth day it was quite pale. I collected some in a tea-spoon, and made it boil over a candle, but it did not coagulate, and it was saltish to the taste.

"Some months after when I saw him he could hear tolerably with the right ear, but remained perfectly deaf of the left." P. 12.

We must pass over a number of cases and observations respecting disorders of the auditory nerves, from page 12 to 29 of the work, part of which have been read in or published by the Medico-Chirurgical Society.

II. In the second chapter our author takes up diseases and injuries of the nerves of voluntary motion in general.

It is this class which principally suffers in paralytic affections, though the nerves of sense in the skin arise with the others going to the muscles. Mr. S. endeavours to account for this phenomenon "by supposing that the muscles of voluntary motion require the nerves to be in the most perfect state to enable them to act, and that a less degree of perfection is necessary for them to perform the functions required for the sense of feeling."

"When much pressure," says he, "is made on the medulla spinalis, as in most fractures of the spine, all the nerves below the injury lose entirely the power of communicating either sensation or motion to the parts to which they are distributed. When the pressure has been rather less, and some power of transmitting the nervous influence is left, it is sensation in different degrees that is produced. When the pressure is still less, there is along with sensation a feeble power over the muscles; and these circumstances, I think, go to prove what I have stated already, viz. that when the functions of the nerves of a limb are impaired, as in paralysis, they must all equally suffer; and the apparent difference of the effects of the paralysis in the several parts affected by it, arises from the different degrees of perfection necessary for enabling each of them to perform their functions." 31.

It sometimes is the case, but comparatively rare, that the nerves of sensation suffer from paralysis, while those of voluntary motion, though arising from the same trunks, are little affected. When this occurs, our author thinks that such an alteration takes place in the skin as prevents the proper exercise of the nerves distributed to it. We know, indeed, that the sense of feeling will vary according to the state of the skin, and particularly of the blood-vessels.

"In further support of the opinion, I might mention the different constructions of the organs or parts themselves necessary for furnishing the nerves with a proper supply of blood; but I will merely describe the curious structure in the nose, which appears to me to be formed for the perfection of the sense of smell.

"Beneath the Schneiderian membrane there are numerous sinuses, and many of them of considerable size, which have frequent communications with each other, and appear to be composed of a very thin and inelastic membrane, which is very strong, and perfectly smooth in the inside: within the sinuses are contained very delicate and extremely elastic vessels, which may be called veins, as they appear to be filled with venous blood; and by their being thus situated within sinuses of a determinate size, they are capable of being distended to a certain degree only; which provision is necessary, as their extreme delicacy would otherwise either endanger their very frequent breaking from over-distention, or be the cause of much injury to the very delicate nerves by a too great pressure that would be thus made on them.

"This structure, I have no doubt, generally exists in animals, and may be very satisfactorily demonstrated in the horse; and it must, I think, appear to any one examining its peculiarities attentively, that it was not formed merely for returning the blood from the nose, but that it was made for distending the Schneiderian membrane, so as to give it a proper degree of tension to enable the nerves to receive more acutely the impressions from the odorous particles when applied to them; exactly in the same manner that it is required for the nerves of the penis to produce their peculiar sensations, that the parts connected with them should be properly distended with blood." 34.

III. Passing over physiology, we come to the pathology of the nerves of voluntary motion, in the 3d chapter of the work before us. These diseases are of two kinds, active and passive, or painful and paralytic. In the *former* class there is an increased action of the blood-vessels, and also of the animal temperature of the apparent seat of disease—in the *latter* class there is a contrary state. In the following sentiments we entirely agree with our intelligent author.

"Those local complaints which appear to originate spontaneously, or in some cases where a slight wound has been inflicted, I believe to be only symptomatic of a general irritability of the brain and nervous system. The almost constant failure of topical remedies, and of the division of the affected nerve, must lead to the conclusion that the cause of the local diseased action, or primary affection, must reside in some other part of the body; and if we inquire into the causes of the local active affections of the nerves, it will be found that the atonic state of the body, or whatever tends to render the brain and nervous system irritable, will generally be found the most frequent." 38.

This irritability of the brain, Mr. Swan observes, is produced by any excessive exertion of its powers, such as too great attention to business, the depressing passions, irregularity of living, inordinate use of fermented liquors, disordered states of the digestive organs, &c. The stomach being the centre of sympathies, there is no part of the body that is not liable to be affected by the state of this organ. "But why part of a nerve should suffer without any alteration in its organization is almost inexplicable." On this sentiment we would remark, that we are by no means authorized to affirm that there is no actual, because no apparent, alteration of structure in a nerve; and moreover as the pain is generally referred to a place distant more or less from the seat of irritation or lesion, we cannot expect to find the alteration of structure at that part, if it at all exist.

IV. The fourth chapter is dedicated to those painful affec-

tions of the nerves about the head and face which have been variously denominated, as clavus hystericus, hemicrania, tic douloureux, &c. "appearing to be all the same disease, only varying in situation and degree." The symptomatology of this class of affections is unfortunately too well known. The pain, though sometimes attacking the whole, or great part of the head, is generally confined to one side only, and frequently to but a part of that, as one eye, the upper lip and nose, the gums, &c. varying in different people, from a common headach to the most exquisite anguish which human nature can possibly suffer without destroying life. "Volat enim angor per nervi surculos fulgure ociùs, desinitque sensu vibrante, ægrotum miserimum attonitumque subitò relinquente."*

"When the pain is confined principally to the head, and has become almost continual, it may be suspected that there is some disease within the cranium; on the contrary, if there is a perfect intermission in the twenty-four hours at about the same time, or if the pain, though constant, becomes more violent once in twenty-four hours at about the same hour, and continues so for some time, and then somewhat abates; if it strikes down the face, and wine does not increase it, and if the patient has been bled from the arm, and has experienced no relief; in all these cases, it may be judged to be an affection of the nerves without the cranium." 43.

Anatomy has done but little, as yet, in explaining the exact nature of tic douloureux; for, although it generally happens that this complaint, especially in its progress, is attended with an increase of heat, and also of vascularity in the part affected, yet it appears to Mr. Swan that these are the *effects* of the nervous irritation, which, however, may tend to increase and keep up their cause. The nerves may become enlarged from irritation, in the same way the muscles are from continued action; but dissection, our author observes, has not shown those depositions of coagulable lymph, and changes of structure produced by continued inflammations of other parts of the body, and of the nerves themselves in stumps and portions along the seat of inflammatory action. This is also the opinion of Dr. Kerrison, as expressed at page 6 of his able thesis.

"Sometimes it is produced by irritation, as from an ulcer connected with a branch of a nerve; sometimes from a decayed tooth, from the anastomosis between the affected nerve and those of the teeth, but most frequently from some disorder of the constitution." P. 45.

* Dr. Kerrison's Thesis, page 9

Tic douloureux appears to Mr. Swan a diametrically opposite affection to that of paralysis.

"We find that debility of the body is a state the most fitted for keeping up an irritation of the nervous system; and when any part of it has once become irritated in a subject to which we might suppose there was a predisposition, a habit is formed so as to continue the irritation, which generally becomes stronger and more obstinate, the longer it is unopposed by such remedies as have the power of breaking through it." 46.

Sometimes the complaint terminates spontaneously, sometimes by the supervention of another disease, of which Mr. Swan relates an instance at page 46 of his work. The patient was 43 years of age, and had received a blow on the right eye, which produced a great extravasation of blood between the conjunctiva and sclerotica. At first he complained of very violent pains in the eye, for which he was bled, purged, and had cooling washes. Shortly afterward he complained of stabbing or darting pains, which went from the temple down the face, and sometimes to the ear, coming on in violent paroxysms, and always confined to the nerve. His complaint continued ten weeks, at first almost constant, then twice or thrice a day. At length an eruption, resembling the nettle rash, came all over his body, when the pains instantly ceased, and returned no more.

"During all the time before the eruption his spirits were much depressed. Much anxiety always increased the paroxysms, as did likewise any thing that caused him to be angry; much stooping, or motion of the head, likewise brought them on. During the paroxysms there was a great pulsation of the temporal arteries." 47.

There appears to Mr. Swan two principal indications of treatment in this disease—1st, to strengthen the constitution, and thereby enable it to counteract the habit which favours the continuance of the irritation—the 2d indication is to allay the local irritation.

"The first is best fulfilled by the exhibition of tonic remedies in doses, which must be repeated frequently, and at regular intervals, so as to produce new and regular actions: and when the diseased action is very violent, sedatives must be given, both with a view of alleviating the pain, and assisting the constitution to overcome the morbid actions. The best tonic remedy for affecting this change is bark, which should be taken regularly in doses, from half a drachm to a drachm every three or four hours day and night: wine and malt liquor should be allowed rather freely. In this complaint the digestive organs are frequently disordered, but I have often known them restored during this plan of treatment." 48.

Mr. S. thinks arsenic a doubtful remedy, and that mer-

cury should be used very sparingly. In addition to remedies the patient should take regular and gentle exercise, and endeavour to tranquillize the mind, an endeavour, by the by, that is generally fruitless, for few can call in the precepts of philosophy, or even of religion, to their aid, when labouring under severe corporeal pain! The following case is related by our author to show that tic douloureux and periodical face-ach are the same affection of the nerves; and also for the purpose of showing the manner in which the bark should be administered to produce its beneficial effect.

"Mrs. P., forty-eight years of age, had complained of a violent pain in her face, which extended up the head, and was supposed to proceed from the stump of a tooth. On the eighth day after its first attack I saw her; she complained of very excruciating pain, which came on at nine every evening: it was not the continued pain of the toothach, but came on in excruciating paroxysms, which lasted two or three minutes, and then abated. She would continue easy for a few minutes, and then again the pain would recur; and in this manner she passed her time until seven in the morning, when she became quite easy, though the pain would return occasionally at different times in the day. It seemed to be confined to the upper branches of the portio dura of the seventh pair of nerves. As it was supposed to proceed from a tooth, the tooth was extracted; and as her mouth was inflamed, she took four grains of submuriate of mercury and some purging medicine. On the tenth day I saw her again, when she had received no benefit from what I had done for her. I ordered her the following draught, to be taken half an hour before the pain came on, and the powders to be taken regularly every three hours through the day and night.

"℞. Tinct. Opii. gtt. xl.
Liq. Ant. Tart. gtt. xv.
Aq. Puræ. ℥j. Mf. Haust.
℞. Pulv. Cinchon. Cordifol. ʒss.
——Zingib. gr. iij. Mf. Pulv.

"On the eleventh day I saw her again; the medicines had been taken regularly, and she had passed, upon the whole, a better night." 50.

The pain gradually subsided, and in three or four days more it was removed. In cases, however, where the disease has been of long duration, much more time will be required before the salutary effects of the bark are perceptible. "But it must be persevered in, and taken regularly through the day and night, or it will not be found often to succeed." Here Mr. Swan states a case where the disease was brought on by a blow on the face, which broke one of the incisor teeth. In this instance, two scruples of the bark, with an infusion of the same and cloves, were exhibited every three

hours. These remedies removed the disease in a short time. A subsequent relapse was also cured by the same means.

The next case brought forward by Mr. Swan is to show how debility produces a morbid sensibility of the nervous system, in general, and thus disposes to local complaints of particular nerves. The patient had eaten some hashed hare, which had stood in a brass pan covered with verdigris, in consequence of which his health was much impaired. When Mr. Swan saw him, some months after the accident, he had an affection of the nerves at the back of the head, that caused excruciating pain. He had become weak and much emaciated, and had used a variety of means without any abatement of the complaint. Mr. S. ordered him half a drachm of the powdered cinchona every three hours, and a blister to the back of the neck. As the paroxysm was always most severe in the mornings, a draught with 30 drops of laudanum was ordered at that time, while wine and malt liquors were recommended for drink. Soon after this plan was adopted, the pain began to be less severe, and it gradually diminished till it ceased entirely. As the pain diminished, his bodily health improved.

When the complaint has resisted bark, and the various other methods that have been recommended, as arsenic, belladonna, steel, mercury, &c. then our author considers the division of the nerve as our last hope, though too often a fallacious one. "Nonne verisimile sit," says Dr. Kerrison, "signis aliorum morborum perspectis, quod dolor hic originem ducat a quavis corporis parte longè distante, propter nervorum consensum." *Thesis, p.* 3. Dr. K. illustrates this by adverting to the irregular action of the voluntary muscles in chorea, where the cause of the disease is often unequivocally seated in the abdomen—to the pruritus narium from ascarides in the rectum, and also in the infantile remittent fever, where children will frequently continue to pick the nose and cheeks while any sordes remain in the bowels—the facial irritation immediately subsiding when the cause is removed by cathartics. Dr. Kerrison here asks if it be unlikely that depraved gastric or intestinal secretions should excite painful affections of the fifth pair of nerves from their consent, or rather connexion with the great visceral nerves. In the next sentence, the Doctor asks what is this connexion? This question is answered by himself in a subsequent part of his Thesis. "The connexion of the second branch of the fifth pair with the great sympathetic, by means of the spheno-palatine or vidian nerve, is capable of being demonstrated." Hence, says he, we see the reason why dividing the facial nerves, where tic douloureux is sym-

pathetic of visceral irritation, fails to procure relief, since the vidian junction of the fifth and great sympathetic, "profundior est quam scalpellus chirurgi peritissimi pertingere queat:" 37. Dr. Kerrison seems persuaded that tic douloureux is not a local disease—but depending on a constitutional origin—"sedantium medicamentorum fere omnium applicatio jam dicta, atque multimodis repetita, æque ac nervorum sectiones *quas videram*, absque fructu quam minimo, mihi persuaserunt *neuralgiam facialem spasmodicam a causa generali pendere.*" Dr. K. from attentive observation and experience, has been led to conclude, that depraved secretions in the primæ viæ are the grand causes of this disease, and that although purgation may prove an auxiliary, it will not cure tic douloureux. His principal reliance is on the cinchona judiciously administered, with attention to regimen, open bowels, and other juvantia. He is unable to account for the ratio agendi of this valuable medicine; otherwise than that it changes or corrects the habit of mal-secretion in the stomach and other chylopoietic viscera.

"Absentia doloris capitis, remissio frequens, ademptio etiam totalis cruciatûs, absque remediis topicis, et non rarò sine opio aut quovis pharmaco narcotico, probant, ni fallor, *neuralgiam facialem spasmodicam nec a cerebro, cerebello, neque a nervo faciali quocunque originem trahere;* ergo, probabile ratus sum, ut cinchona, vi quâdam astringente prædita, superficieique purgatæ intestinorum admota, aliquid mutationis efficiat, quo facto, munus eorum magis salubriter perficiatur, ita ut liquor, gasve excitans, haud amplius secernatur, aut conficiatur, et *Irritatio Faciei symptomatica quiescat.*" *Thesis*, 44.

Dr. Kerrison states, that he has used the following means in tic douloureux with very little effect, viz. repeated leeching of the part, cupping,* applications of ice, pouring cold water from a height, extract of belladonna externally, opium, plumbi carbonas, in form of ointment with oil, superacetas plumbi, fomentations of tobacco infusion, blisters, issues, (with some relief,) electricity, prussic acid. In respect to the treatment, Dr. K. lays down the following therapeutical indications, viz. 1st, to cleanse the intestinal canal; 2d, to meliorate the intestinal secretions. He properly considers it superfluous to dwell upon forms or prescriptions, since every one acquainted with physiology, pathology, and thera-

* General bleeding he has never tried, but in a note it appears that Dr. Pemberton had recourse to this measure in his own person, every second day till he could scarcely walk, without making the least impression on the complaint!

peutics, must be capable of combining and adapting remedies according to age and constitution. In order to fulfil the first indication, Dr. K. recommends from three to five grains of calomel to be taken at bed time; and the next morning some jalap and cream of tartar, or castor oil, or senna, varying the pill according to circumstances, but exhibiting it every third night, unless the gums should get tender, when it is to be omitted. With the mercurial preparation, our author sometimes combines antimony, and even recommends the exciting vomiting in some cases as salutary.

To fulfil the second indication he depends, as we said before, on the cinchona, and prefers the following formula:—

℞. Extracti cinchonæ ℈j. ad 3j.
Decoct. ——— fl. 3xiv.
Tincturæ ——— 3j. ad 3iss. fiat haustus tertia vel quartaquaque hora sumendus. But as the patient is apt to get tired of so much bitter medicine, Dr. K. has occasionally given from two scruples to a drachm and a half of the extract of cinchona three or four times a day in wafer paper, washing it down with some water and tincture of bark or nutmeg water.

As a palliative, Dr. K. depends principally on opium, given in doses proportioned to the urgency of the case. In correspondence with his opinions, relative to the cause of the disease, he lays considerable stress on diet. He directs the breakfast to be made of tea, coffee, or chocolate, containing one-third part of milk, with bread and butter, and cold toasted bread. For dinner he thinks the patient should take some light soup with bread, followed by fish, or animal food in moderate quantity; but avoiding all vegetables, excepting good potatoes or turnips. For drink, water or weak brandy and water, is to be allowed. The patient is to use warm clothing, and avoid the night air, wet, cold, and sudden atmospherical vicissitudes.

But to return to Mr. Swan. After giving directions for the division of different branches of the trigemini, he remarks of the portio dura of the auditory nerve, that—

"To attempt to divide the trunk of this nerve will not only be very difficult, but it will be likewise very dangerous: and to divide all the branches that go to the face, requires an incision from the zygoma to the angle of the jaw; but the greatest portion may be divided by making an incision down to the jaw, a little below the zygoma, and thus the main branches of the nerve will be cut through; and if the patient is not relieved by this operation, another incision may be made quite on the angle of the jaw, by which nearly all the principal branches will be divided." 56.

When the *third* branch of the fifth is affected, and the pain is in the side of the tongue and the teeth of the lower jaw, it would be hazardous to attempt its division. But when the lower lip is suffering from an affection of the nerve as it passes out of the foramen in the lower jaw, an operation may, of course, be performed by passing the point of a knife at the root of the first bicuspis tooth, between the lip and bone, down to the foramen, and moving it a little from side to side.

Before taking leave of tic douloureux we may here say a few words respecting the third work at the head of this article. The first lines of Dr. Villers's pamphlet engendered ominous anticipations in our minds. *In not one single case of tic douloureux has this author failed!* No wonder that, encouraged by such unprecedented success, he should come before the public—" regardless equally of the critic's acumen, or the irony of invidious competition, to give publicity to a mode of successful treatment in a diease which, it would appear, has hitherto set medical skill at defiance." P. 1. This *new* mode of treatment consists, besides a few common dietetic rules, in the following prescriptions:—

Formula 1. Ol. succini ℥j. gum. camph. ℈j. fiat embrocatio.

Formula 2. Ex. stramon. gr. ss. ex. col. comp. gr. v. ft. pil. om. nocte sum.

Formula 3. Pulv. cinchon.
Ferri carb. āā℥ss.
Mist. camph. ℥ij. m. ft. haustus sexta quaque hora s.

Formula 4. Extr. belladonn. gr. j. ex. stramon. gr. ss. hora s.s.

Formula 5. Ung. hyd. fort. ℥ij. g. camph. ℈j. ft. unguentum omni nocte utend. ʒss. in partem affectam.

Considering that all the above remedies have been tried, and have failed, over and over again, it is pretty well for Dr. Villers to say in page 8, that the various remedies in the hands of others " have been in vain resorted to, till the unfortunate patient is, in fact, *tortured out of his existence.*" We do not deem it necessary to go farther into this pamphlet. We would recommend the author, before he again throws the gauntlet to critics, to correct the orthography of tic douloureux in the title-page and various other places. He had better, too, revise some of the synonyms, for instance, " dolor facici nervorum *cruciandus.*" " Although," says he, " pre-eminence advances the sciences, yet the field of

hitherto unexplored knowledge remains open, inviting the *speculist* (query, a mirror maker?) to enter the lists of fame, and cull a twig from the luxuriant *branches* of the fertile *soil.*" P. 6. We have heard of branches of trees, rivers, candlesticks—and Bible Societies, but never before understood that literary laurels were to be plucked from branches of *soil.* We just throw out these friendly hints to the author, to convince him that few works are so perfect as to render it prudent for the writer to challenge criticism. For our own parts, we are not inclined to accept these literary challenges. We open books for the sake of gleaning information from them, and not to indulge in pugnacious and censorious disputations.

But to return again to Mr. Swan. In the fifth chapter, Mr. Swan takes up the subject of painful affections of other nerves than those of the face. He relates a case at page 58, where the neuralgic affection extended in the course of the ulnar nerve, from the elbow to the little and ring fingers, the pain coming on in fits, with disturbance of the digestive organs, and palpitations of the heart.

"She used a spirituous embrocation for the arm, and took five grains of the mercurial pill at bed-time, and a mixture with camphor and the volatile tincture of valerian, by which the pain was diminished. She was then attacked by a severe affection of the uterus; and after some time, when she was recovering from this complaint, the pain in the nerve ceased entirely, and never returned." 59.

Mr. Earle has related a similar case in the 7th vol. of the Medico-Chirurgical Transactions, where the complaint was cured by cutting out a portion of the nerve. Mr. Abernethy has also published an interesting case of a young lady, where the complaint was seated in the integuments of one of the fingers, and which was ultimately cured by cutting out half an inch of the digital nerve. Mr. Swan therefore prefers the removal of a piece of nerve to a simple division of it, from which two advantages are derived—in the first place, "because the divided portions would be longer in uniting, and more time would therefore be afforded for the diseased action of the parts to wear off—and secondly, because they would retract out of the reach of the external wound, and be less liable to partake of any inflammation or other irritation occasioned by it."

From experiments made by Dr. Haighton and Sir Everard Home, it would appear that the uniting medium of nerves has the power of transmitting some nervous influence in the course of a few days, or even in twenty-four hours. Our author thinks it questionable whether the nerves have the

power of communicating their influence to other nerves, whose communications with the brain have been cut off, in the same manner as the arteries have, whose direct communication with the main trunk has been intercepted by a ligature. At all events it can only exist in a very trifling degree. In a case related by Mr. Earle, where he cut out a portion of the ulnar nerve behind the inner condyle of the os humeri, the little finger remained nearly useless five years after the operation, and sensation was very imperfect.

VI. The 6th chapter is on inflammation of nerves. When a nerve is inflamed, (which generally takes place from contiguity to an inflamed part.) it becomes increased in size from a deposit of coagulable lymph between its fibres. Acute *idiopathic* inflammation of a nerve Mr. Swan believes to be of rare occurrence. Chronic phlogosis, however, is more common. It sometimes affects the extremities of nerves in amputated stumps. They appear enlarged in these cases, for some distance, and their extremities are swollen into a ganglliform tumour. When the nerves are in this state the patient suffers so much pain from the least touch, as to be obliged to submit to a second amputation. In most cases of what are termed sciatica, Mr. S. believes the disease to be an inflammation of the neurilema frequently ending in an effusion of serous fluid.

"When people of a very robust habit are affected with this complaint, it is necessary to take some blood from the arm, at the same time local evacuations of blood are necessary; afterward a large blister should be applied over the seat of the pain, and purgative medicines should be administered.

"When the complaint does not give way to these remedies, the extract of stramonium should be given in doses of a quarter of a grain gradually increased to two grains, three times a day. In some instances, when every thing has failed, an entire confinement to bed, and tonic medicines, with as much opium or other anodyne as will moderate the pain, has been found to succeed.

"In obstinate cases, it will also be of use that an issue should be made near the trochanter, and that a grain of submuriate of mercury should also be given every night." 68.

To the above means we would recommend from forty to sixty minims of the *vinum seminis colchici* for a few nights at bed-time, after large local evacuations of blood by means of leeches. We have recently had considerable success by these means in two or three cases of obstinate sciatica.

VII. *Ulceration of Nerves.* The following case in illustration of the subject we have considerably abridged. Wm. Sharpe, a soldier. ætat. 51, was wounded, at the age of 15,

in the tibia, by a splinter of wood, followed by an exfoliation of bone, and healing of the wound, which continued well till the year 1814, when he received the kick of a horse, and the wound opened out again to an extent of six inches by three. Some exfoliations came away, and in 1817 it began to have a fungous appearance, with considerable hemorrhages on being touched. Escharotics reduced the fungus to the level of the surrounding parts; but before this reduction he had suffered such violent pain in the thigh and leg, that he desired amputation, which at length was performed in June, 1819, followed by perfect recovery in a month. On examining the limb, the bone was found enlarged upwards, with a considerable hollow in it opposite to the ulcer, occupied by the fungus. In this hollow the bone was spongy and soft, but none of its exterior part dead. The fungus seemed to grow from the hollow of the bone. The muscles of the leg had lost their natural character, and very much resembled fat. The sciatic nerve was much enlarged, and many of its branches proportionally so.

"The greatest part of the nerves was covered with a layer of a substance resembling fat, but very different in appearance from the other fat of the limb, or from that which is usually about the nerves; when freed from this, most of them had the nervous appearance, though they were apparently of a closer texture than sound ones. Several varicose veins were observed in different parts of the sciatic nerve. Some of the nerves were unusually soft, being easily torn. The following is a particular description of each nerve.

"The branch of the anterior crural nerve that accompanies the saphena major vein was somewhat enlarged; about an inch and a half above the ulcer it was still larger, and even with the ulcer, by which it was nearly surrounded; at the upper part it was firmly united to the adjacent parts for an inch and a half, after that it was loosely connected with them, and then again for rather more than two inches it was firmly united to them; near the malleolus internus it became of its natural size and appearance." 73.

Nearly the same may be said of the fibular and anterior tibial nerves. About an inch of the former nerve, however, was in a state of ulceration; "so much so, in one place, as to be nearly divided." The anterior tibial nerve enlarged proceeded firmly united all the way to the surrounding parts, and at one place between the tibia and fibula, it was so blended and confounded with the textures in its vicinity, as hardly to be recognised. In this case our author concludes that the pain was owing to the dilated veins, as the patient never had any pain after the limb was amputated, and the stump healed well—a clear proof, he

thinks, that though the nerve was enlarged, it was not diseased; the enlargement and pain proceeding from the ulcerated state of the parts in the leg. Here Mr. Swan introduces a passage from Morgagni, to show how violent the pain is when the nerves are in a state of ulceration. The case was an aneurism in the right groin, which extended backwards so as to produce ulceration in the sciatic nerve.

"'In the last month the pains became most severe, not only in the tumour, but sometimes beneath the internal malleolus; in which place only, violent as the pains were, the foot was sensible, being in every other part deprived of feeling and motion. In all this month he neither had an interval of ease nor any sleep until his strength failed; then for some days he lay half asleep, and so died.

"'On examining the limb, the nerve was so much eroded, that a few fibres hardly remained by which the superior and inferior parts were joined together.'" 76.

VIII. *Tumours in the Nerves.* These may be distinguished by the excessive pain which pressure occasions, and from its shooting generally in the exact course of the nerve, though Mr. Charles Bell, in his Operative Surgery, relates an exception to this rule, where a tumour in the ham did not, when pressed on, cause any particular pain, but rather a sense of pricking numbness down the leg. On dissection the sciatic nerve was found to enter into the substance of the tumour. Mr. Swan thinks it better to cut out the portion of nerve in which the tumour is seated, than to dissect the tumour out of the nerve. Here Mr. Swan instances cases from his own and the practice of others, illustrative of the foregoing observations.

IX. & X. *Divided Nerves.* If a nerve have been divided, and the external wound is healed by the first intention, very little pain is felt in the nerve, and sensation gradually, though slowly, returns. An open ulcer, however, connected with a wounded nerve, is generally very painful, and sometimes produces violent symptoms; consequently it is a matter of the greatest consequence, when a nerve is divided, to effect union of the parts around it by the first intention.

"When a nerve has been divided, and the external wound has healed, and there are marks of inflammation about the cicatrix, as a slight redness, tumefaction, and tenderness on pressure, it frequently happens that this inflammation is communicated to the nerve, and causes great pain, which is generally aggravated by any motion of the part.

"The best method of treatment will be to apply leeches near the parts, and evaporating lotions, and to keep them constantly at rest.

"I need not say how necessary it is in all diseases to pay proper

attention to the state of the digestive organs, and that it is so most especially in all diseases and injuries of the nerves." 98.

In the following case, the sciatic nerve was wounded by a fracture of the thigh bone—an accident, Mr. Swan thinks, of not very unfrequent occurrence.

"John Wright, about seventy years of age, got a fall about the beginning of May, and injured the left hip. I saw him for the first time on the first of June. The knee and foot were turned completely inwards; and if this position of the limb was changed, it was always soon resumed: the thigh could be raised by an assistant towards the abdomen as high as usual, but could not be rotated much: the limb was shortened about an inch; the trochanter major was not far from its usual situation, but behind it there was a rounded tumour, which was apparent, and could be distinctly felt, so as to convey the exact resemblance of the head of the thigh-bone: when the hand was placed about the trochanter, and the limb was moved, a crepitus could be felt: the limb had the exact appearance of the dislocation backwards. He complained of very violent pain for some time, much more than is usual; but for the last two or three weeks he lay in an almost insensible state: he was in a very debilitated state before the accident, but after it he never had any appetite; so that he sunk from complete exhaustion on the twenty-fourth of June.

"The next morning I examined the part where the injury was received.

"On dividing the integuments, a small quantity of a dark-coloured fluid escaped: all the parts for some distance appeared one confused mass, from the quantity of coagulated extravasated blood. The thigh-bone was broken through below the capsular ligament, and another portion was broken off below this, in an oblique direction, so as to leave the trochanter major nearly perfect; this portion lay behind the trochanter, and when covered by the integuments had a rounded feel like the head of the bone: another small portion was likewise completely detached. All the portions of bone were surrounded by coagulated blood, which appeared to have become organized, for in several parts of it were found osseous deposits: the head of the bone appeared inflamed, and was coated with coagulable lymph. Nearly all the cartilage lining the acetabulum was absorbed.

"The sciatic nerve was much enlarged, and likewise surrounded by coagulated blood; and in one place a portion of coagulum, about the size of a filbert, adhered very firmly to it; and when it was examined, portions of a whitish substance might very distinctly be seen in it, so as to convey the idea of this part having taken on the structure of newly-formed nerve: at this part some nervous fibrils had been lacerated." 103.

The appearances of the limb in this case differed from what are usually presented in fractures of the neck of the thigh-bone. They might, without great care, have been

mistaken for dislocation of the bone backwards. Under such a mistake how greatly would the patient's sufferings have been aggravated by extension of the limb!

XI. The eleventh chapter of Mr. Swan's work is on punctures or partial divisions of nerves. This accident may be suspected when every acute pain accompanies the infliction of a wound, especially if the pain extends in the course of the nerve accompanied by convulsions or other symptoms of great nervous irritation. We shall abridge an interesting case of punctured nerve, communicated to Mr. Swan by Dr. Wilson of Grantham. Dr. W. was called to a woman labouring under strong convulsions. She had been bled two days before by a gardener, considerable pain being experienced at the time, shooting from the wound up to the shoulder. The wound was somewhat inflamed, and a thin liquor oozed from its lips. While making the examination, the woman became strongly convulsed. With the view of interrupting the communication from the diseased point to the sensorium, a tourniquet was applied above the part. A remission of the spasms soon followed, and an anodyne was administered; but the convulsions, after a short interval of ease, recurred as before, and another application of the tourniquet produced no good effect.

"As I had no doubt," says Dr. Wilson, "that the cause of the disorder was an injury of a cutaneous nerve in the operation of venesection, I determined to endeavour, by a transverse incision, to divide the nerve above the injured part, and to destroy its connexion with the sensorium; I therefore made an incision while the convulsions were most violent, of about an inch in length and small depth just above the orifice: no mitigation of symptoms was perceived; but on making another incision above the former one, somewhat deeper and longer, she cried out immediately, to the astonishment of the attendants, 'I am well, I am quite well, I can stir my arm;' which she began to move, and continued to do so with great delight for some time in various ways. She had no return of the spasms, and very soon got well." 109.

When a nerve has been wholly divided, each portion immediately retracts to some distance. When partially divided, the divided portions retract in the same manner, though not in the same degree. Each nerve being composed of different fasciculi, and these fasciculi generally communicating together, it follows that if a fasciculus be partially divided, or wholly divided where it communicates with its neighbour, an unnatural distention of parts will take place, accompanied with considerable pain. This will be still more the case if a nerve be wholly divided, with the exception of one fasci-

culus, which one will be greatly on the stretch. Still, as nerves must be totally or partially divided in almost all the accidents and operations to which the human frame is liable, it is difficult to account for the comparative rarity of any serious accidents succeeding these lesions. That the wound of a nerve may be the entire and immediate cause of the symptoms, independent of inflammation, or any thing else that could irritate the nerve, the following case, from Sabatier's Medecine Operatoire, is brought forward by Mr. Swan to prove.

"'This slight operation,' he says, 'was very painful, and was soon followed by convulsive motions, which extended themselves through the whole of the wounded extremity, and then through the rest of the body: these symptoms were not accompanied by any tumefaction, and were very often renewed. The patient could neither walk, nor ride in a carriage. This state having continued a long time, notwithstanding the use of antispasmodics and quieting remedies, I advised a division of the saphenus nerve, but it was not consented to; nevertheless the nervous symptoms gradually diminished, and the patient partly recovered her health, after five or six years almost continual suffering.'" 114.

Mr. Swan would advise, in cases of injured nerve from bleeding, that several leeches be applied to the neighbourhood of the part, and afterward evaporating lotions. Should these disagree, poppy fomentations and poultices are to be tried, keeping the limb as quiet and easy as possible. He has no doubt that the greater number of injured nerves in venesection are rendered troublesome by too much exertion of the arm inducing inflammation. We have had reason to believe, that the state of the atmosphere has sometimes an effect in festering venesection wounds—at least during the severe winter of 1812–13, in Holland, a great number of men who were bled for pneumonia, and who used no muscular efforts at all afterward, had the wounds inflamed, and that without any suspicion of bad lancets or improper modes of opening the veins. Mr. Swan relates the following case to show that if a nerve be wounded in bleeding, and the external wound heals by the first intention, the wound of the nerve will not be of much consequence.

"I bled Mrs. D. in the median cephalic vein; she complained of very acute pain at the time I made the puncture, and it continued for several hours.

"As I was certain from the manner in which she complained that I had wounded a nerve, I was very careful in binding up the arm well, so as to keep the lips of the wound in exact contact, and at the same time told her of the necessity there was for keeping her arm

entirely at rest. The wound healed by the first intention, and the pain did not return." 116.

Mr. Swan is of opinion that in whatever way nerves are wounded, the lesions are repaired by Nature alone. It is therefore right, when an accident of this kind happens in venesection, to wait for a while and try palliatives. But if the irritation induce convulsions, as in the case related by Dr. Wilson, and threaten life, an operation should be attempted in order to cut off the communication between the brain and the wounded nerve. Mr. Swan quotes two cases from M. Larrey, in elucidation of this principle, although the accidents did not arise from venesection.

"The first was that of a man who was struck by a ball, which crossed the right arm, and wounded the biceps and coraco-brachialis muscles, and the radial and internal cutaneous nerves. On the eighth day he began to have great pain; and it was wished to divide a bridge left by the wound, in which were found some branches of the internal cutaneous nerve, but the patient refused to have it done. The next day his local pains were very acute; he had convulsive motions of the hand and fore arm, heat in the whole system, and locked jaw; he was very restless, and in continual agitation. The rapid progress of the symptoms determined Larrey to divide the bridge, and cut the bottom of the wound, where he found several nervous bridles. This operation was very painful; but two hours afterward the patient was much relieved, and in the space of two days all the symptoms disappeared.

"The second was that of a man who received an injury from a spear on the right side of the forehead. The point of the spear had slided obliquely from below upwards and inwards under the pericranium, so as to make a deep fissure in the frontal bone: one of the superciliary nerves was grazed by the cutting side of the spear.

"Nine days passed without any alarming symptoms, and it was considered as a simple wound; but in the night between the ninth and tenth days tetanus came on, with convulsive motions of the corresponding eyelids, and a loss of sight in that eye: there was a little mental wandering, a very acute pain, locked jaw, and a very marked disposition to emprosthotonos.

"Emollients were immediately applied to the wound, and diaphoretic and opiate draughts were given without effect; the complaints went on increasing, and in twenty-four hours would have been at their greatest height. The wound was then examined with a probe, which gave very acute pain; this determined Larrey to divide from below upwards with a bistoury the whole of the superciliary muscle, the nerves, and vessels: the patient was immediately relieved, and in less than twenty-four hours all the tetanic symptoms had disappeared." 120.

Mr. Swan next extracts a case from Sabatier, which he thinks may throw some additional light on the subject of

wounded nerves. A young man received a stab near the knee, at the inferior and inner part of the left thigh, in the course of the saphena vein and nerve. After considerable hæmorrhage, tumefaction and fever supervened, the affected extremity being very painful. When these symptoms had abated, a trembling and nervous agitation of the leg and thigh came on, and resisted all attempts at alleviation. M. Sabatier thrust a sword through the thigh of a dead subject, in the same direction, and found the saphena entirely divided, and the nerve cut half through. He therefore advised the cautery, to which the young man would not submit. The patient continued lame for some months, but, ultimately, though slowly, recovered. We must pass over Mr. Swan's remarks on tetanus, as nothing particular occurs in that portion of the work.

XII. & XIII. The twelfth chapter is on ligature of nerves, and the thirteenth on compression of them. The former is short, and does not contain any thing novel. The thirteenth chapter contains several interesting cases, but we find our limits overstepped, and shall only be able to make one extract as an example. The case is introduced by Mr. Swan to show that when there has been a paraplegia, it is necessary to draw off the urine, not only on account of the bladder, but because the over-distention of this organ causes pressure on the nerves, and thus tends to prevent their recovery.

"Nov. 6, 1819. Mr. F., aged twenty-five, had the heartburn, after which he ate a hearty dinner of beef and apple dumpling, and the heartburn went off. Soon after he carried a weight of wood for some distance, which produced the heartburn again, and he was obliged to lie down on the damp ground from feeling so unwell. After he had laid a little while his legs began to feel weak, and he had much difficulty in walking home, as the powers of the muscles kept diminishing, and at last they entirely failed. The bladder, and also the sphincter ani, lost almost entirely their muscular power: the paralysis extended from the pit of the stomach downwards: he had no power of moving any of the muscles: he felt well, except being thirsty, and had a good appetite: when the bladder was very much distended he felt pain, but it was not violent: the feeling of the skin was so far perfect as to render him sensible of the slightest touch; but moderately cold things applied to the skin did not feel cold, nor did hot things feel more than just warm; his sensations of heat and cold with the upper extremities were perfect, and very different from those experienced by the lower.

"The symptoms in this case are slighter than those usually met with where pressure is made on the medulla spinalis, as in fractures of the spine; and, I think, prove, beyond all doubt, that the nerves

have all the same degree of feeling, but that the various agents that call them into action act in a more easy or difficult manner. The sense of touch is by far the most mechanical; moderate degrees of heat and cold are less active agents; and the will still less."

XIV. Mr. Swan's fourteenth chapter contains numerous experiments on animals, for the purpose of ascertaining the process which nature employs for repairing wounds of nerves. Into these experiments we cannot enter, as they require to be read with care, and cannot be abridged. From the concluding chapter we shall make some extracts.

"It will be seen from these experiments, in the first place, that after a division of a nerve, the extremities of the divided portions become enlarged and more vascular, but especially the upper portion; and coagulable lymph, having the appearance of white of egg, is effused, which soon becomes vascular. In a few days the coagulable lymph from each portion becomes united, and anastomoses from between the blood-vessels; the coagulable lymph gradually assumes a firmer texture, and the number of the blood-vessels diminishes, and the newly-formed substance appears to contract, like all other cicatrices, so as to bring the extremities of the divided portions nearer and nearer to each other. It is difficult to determine from an experiment on the limb of an animal the exact time at which the nerve again performs its functions. In eight weeks after the division of the sciatic nerve, I have observed a rabbit to be in some degree improved in the use of its leg, but at the end of eighteen weeks it was not perfect. When the nerves of the leg of a horse have been divided just above the foot, they are sufficiently restored to perform their functions in a very great degree in six or eight weeks; but it must be observed that these nerves are only formed for sensation, and it is very different with the nerves of voluntary motion." 184.

Though this is the general way in which a divided nerve reunites, yet the reunion is sometimes accomplished by granulations. It appears also from Mr. Swan's experiments, that when a portion of nerve is cut away, the same restorative process is set up as when there is merely a division of the nerve; but the divided portions appear never to be again restored to the same size as the original nerve. The following curious circumstance we shall here quote.

"A horse had been lame for two years, at the end of which time an inch of each nerve going to the foot was cut out; after this he went very well for six months, when he again became lame, and continued so five months; at the end of this time, he appeared to suffer such dreadful pain that he was killed. At the time he was operated on, it was supposed that the disease was the same in both fore legs, so that portions of the nerves of both of them were removed.

"On examining the legs after he was killed, one was very much

swelled, especially at the foot, where matter was discharged by several sinuses leading to the coffin bone, which was quite carious.

"On further examination, the nerves of this leg were found to have reunited, and the new-formed substance was very large, and appeared to have the same structure as that which forms the bond of union when a nerve has been simply divided. The nerves, above the place where they were divided, were found to be much larger than those of the opposite leg in the same place. In the opposite leg, in which there did not appear to be much disease, the nerves had reunited, but the bond of union was not so large as in the other leg.

"From these circumstances, it appears to me that the functions of the nerves were again performed, through the medium of the new-formed substance; but I am informed this is not usually the case when so large a portion as an inch of the nerve has been removed; and this circumstance shows, that in this instance it must have been owing to the irritation occasioned by the disease in the foot." 186.

Another conclusion deduced from our author's experiments is, that when a nerve has been included in a ligature, the parts to which it is distributed are deprived of sensation and motion, in the same manner as when the nerve has been divided. Immediately after the application of the ligature, the vessels of the nerve begin to enlarge and become numerous, coagulable lymph being, in the mean time, effused from the nerve above and below the ligature, through which the vessels shoot and anastomose. The ligature becomes incased by the lymph. Immediately after it is cast off, the separated portions of nerve begin to unite, and the process of reparation goes on until the union is so complete, as to enable it to perform its functions.

But we must conclude. We hope we have done justice to Mr. Swan's work, which we conceive to be highly creditable to his zeal and talents. We trust that he will persevere in the investigation of abstruse points (of which there are, unfortunately, too many) in medical science, and for which investigation Mr. Swan's abilities appear to be well calculated. The plates of this work are very well executed.

VI.

A Treatise on the Epidemic Cholera of India. By James Boyle, Surgeon of His Majesty's Ship Minden, &c. &c. In octavo, pp. 75. London, 1821.

The ravages of the plague, at least in modern times, have produced nothing like the destruction of this Epidemic Cholera; and unfortunately it is not the epidemic of a season, but that of a series of years, of which the termination is not

yet in view. Of its etiology we know nothing—or next to nothing; its pathology admits of doubt; and its treatment is but too often unsuccessful. Under these circumstances, we must be contented with such gleams of light as observers have been able to throw upon the nature and management of this formidable disease.

The author of the little volume before us is a meritorious young naval surgeon, who, whilst serving on board His Majesty's Ship Minden, with the Commander in Chief, in the East Indies, had to treat many cases of the Epidemic Cholera, and has here offered the results of his observations and reflections to his brethren at large. We have lately devoted so much space to the consideration of this wide-spreading disease, that we must be very limited in our analytical notice of the tract under review.

Mr. Boyle thinks that more depends on combating casual symptoms as they occur, in this disease, than on any systematic mode of treatment. Our author makes many judicious observations on the remote causes of Indian Cholera, especially drunkenness, marsh effluvia, and constipation of the bowels, sustaining his remarks by appropriate cases. His *post mortem* investigations do not materially differ from those which we have given an ample account of in this Journal. The following fact has been very generally confirmed by all accurate observers.

"It sometimes happens, that patients despaired of, have a critical evacuation of viscid bile, exactly resembling that which has been noticed in the gall-bladder of those who had died of the disease with obstruction of the biliary ducts. When this circumstance takes place, the patient invariably recovers; and I have known it to occur three or four times, in cases where the pulse had been almost imperceptible for twenty-four hours." P. 51.

Bleeding, Mr. Boyle thinks, is a remedy applicable only to the milder cases of this destructive cholera. Before reaction he considers the remedy useless, if not pernicious;—after that process has taken place, he imagines the original disease no longer exists.

"The great extent to which mercury has been carried of late years by the first practitioners, and it having now gained the ascendency of popular opinion over vulgar prejudice and inconsistent objections, has a just claim for consideration as a remedial measure in the management of this complaint. The universally acknowledged circumstance of the absence of bile in bad cases of Cholera, and the more than idea that mercury acts specifically on the liver and biliary system, are also strong incentives in favour of its use. Fatal cases, however, but too frequently occur where calomel is rejected as fast as it is given; or if retained, is found on examination after death,

to have insinuated itself between the rugæ of the stomach, perfect in appearance, and without having had any effect whatever. Mercury, therefore, ought not to be depended on in this disease as long as nausea and sickness of stomach prevail, and to restrain which, by sedatives, appears almost impossible in severe cases, till all sensibility be destroyed, when it matters not what is given." 56.

The warm bath, he observes, in dangerous cases, is always advisable; "but measures of greater importance should be actively employed during its preparation." Mr. Boyle never observed any benefit from the bath, unless it was so graduated as to make the patient complain of its heat.

"When the bath is of such temperature as to be only agreeable to the person, the remedy appears altogether inert; but when, from heat and the patient's sensibility, remonstrance and even force is necessary to keep him in it, the result is usually favourable." 57.

Our author remarks, at page 58, that "the grand, primary, and most essential object in the treatment of cholera morbus is, *to restore the balance of the circulation* as quickly as possible." This is, as he observes, a general opinion; but unfortunately the restoration is not so easily effected.

"The constant nausea and irritation of stomach, which is observable in the early stages of this complaint, without full or violent vomiting, simply spouting up, as it were, any thing swallowed; the obstruction of the biliary ducts observed in dissection, and a general want of success in practice; induced me to embrace ideas pecfectly new on the subject. The obstruction of the biliary ducts I looked on as a source of irritation to the nervous system generally, and the nausea, and sickness of stomach, as an effort of nature to free herself of an unaccustomed evil.

"In accounting for the causes of this disease, it has been observed, and with great justice, that when, from the exertions to vomit, bile makes its appearance, a favourable prognosis may be formed. Now, if the appearance of bile be a salutary one, (and it certainly is,) why not favour the progress of its formation, instead of obstructing its passage by the administration of sedatives. We know of nothing which will increase the secretion of bile so quickly or so effectually as the act of vomiting; we also know the sympathy which subsists between the liver and stomach, and that derangement of either organ will more or less affect both. It is evident, then, that the gastric derangement peculiar to this disease, is not only indicative of the existence of lurking mischief, but directly points to the treatment. Further, of all the cases of which I have seen or heard, there was not one fatal termination after bile had, in any way, or by any means, made its appearance." 61.

Reflecting on these circumstances, our author was led to try *emetics* as the most likely measure to answer the various purposes of clearing the stomach, removing obstructions of

the biliary ducts, and exciting a new action in the vascular system. We shall state the first case that presents itself as a specimen of all.

"*Minden, at Trincomalee, Feb. 28th*, 1821.

"James Leister (S) complained at 2 P. M. of headach and pain of bowels, with thirst and tottering of the limbs. The pulse was small and feeble; the skin was particularly cold; and the countenance greatly dejected. Cramps of the toes, fingers, and abdominal muscles, soon succeeded this state; followed by nausea, sickness of stomach, and a peculiar shrivelled appearance of the integuments of the fingers. The pulse at the wrist was scarcely to be felt; the extremities were apparently lifeless; eyes dull and fixed, exhibiting a shining, glassy appearance; with a collapsed, dark-coloured countenance, and constant attempts to vomit. Gave him antim. tart. in repeated small doses, for the purpose of causing full vomiting. This not having the desired effect, five grains were given at once; still, however, the efforts to vomit were faint and ineffectual. Pulv. ipecac. ℈j. statim. This, followed up by copious draughts of warm water, caused violent retching and vomiting. During this time, the feet were placed in pediluvium; a hot bath was ordered to be in readiness; and the patient having been placed in bed, was allowed to drink freely of arrack punch with spt. lavend. comp. An ounce of mercurial ointment was rubbed over the region of the liver in one hour; at the expiration of which time, reaction had tolerably established itself. The voice was yet low and indistinct; and he had partial, cold, clammy perspirations. He was now placed in the hot bath, with the intention of keeping up the action of the heart, and influencing the operation of the mercury. A purgative enema was thrown up, which was followed by a copious, thin, clay-coloured evacuation. After this, what was passed had more the appearance of congee water* than any thing else to which I can compare it.

"At six P. M. pulse still feeble, but distinct; voice returning; complains only of debility and pain of bowels. Hab. statim subm. hyd. ℈j. At ten, had several thin dejections, but without a particle of bile, and still complains of pain of bowels. Applicet. emp. lyttæ ad region. abdomin. et repet. subm. hyd.

"29th. Complains of great debility. Pulse still small and feeble, skin moderately warm, but dry with thirst. Had a purgative at four A. M. which operated. Still no bile. Repet. subm. hyd.

"1st. of March. Still extremely languid, although free from pain. No bile in his evacuations; nor is the mouth affected. Pil. alter. ter in die.

"2d. Mouth slightly sore; evacuations natural. Omit the pill. et habeat inf. quassiæ.

"Was discharged to duty on the eighth following." P. 64.

* A name given to rice-water in India.

Sincerely do we hope that the measure suggested and adopted by our author may be found serviceable in the hands of others also. If such should be the case, Mr. Boyle will be entitled to the esteem of his professional brethren in the Eastern world, to whom we recommend this sensible and unostentatious little treatise.

VII.

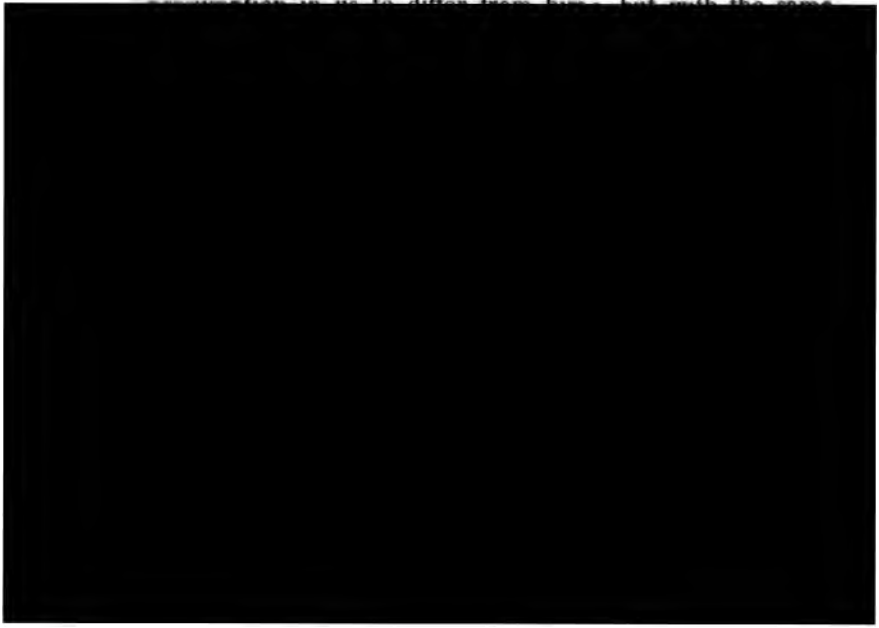
An Inquiry into the Nature and Treatment of Gravel, Calculus, and other Diseases connected with a Deranged Operation of the Urinary Organs. By William Prout, M.D. F.R.S. London, 1821, pp. 227.

In the course of our critical avocations, it has seldom occurred to us to rise from the perusal of a medical work with such favourable impressions as in the present instance. It is too often our lot to have our attention attracted by glaring marks of hurried composition, and of inaccurate reasoning, or to find the author copying whole passages from preceding writers, without any attempt at verifying their observations. Dr. Prout is an author of a very different stamp, and to understand his work, it must be examined in a very different way from that which may frequently be practised with modern medical productions, without any injustice to the author. We mean to say, that it is not here sufficient to turn over the pages, and occasionally to pause upon a particular passage. This is a volume which must be accurately studied to be thoroughly understood. The author tells us that, for many years past, he has been in the habit of attending closely to the diseases of the urinary organs; and from the whole tenor of the work it is clear that he has done so, and that his pathological views have been almost exclusively the results of his own *individual* observation. An air of *originality* certainly prevails throughout this volume, which is highly creditable to the author, and the feeling of which was certainly predominant with us while engaged in its perusal; but we are far from saying, that it does not come recommended to us by other and higher merits than the mere novelty of the views which it opens. It is the work of an *accurate* as well as of an *original* writer. Dr. Prout has laid the best possible foundation for becoming a good pathologist, by the assiduous attention which he has long paid to the subject of animal chymistry in general. We do not now propose to discuss the question *how far* the

doctrines of animal chymistry may be made subservient to the promotion of physiology and pathology, but of this we are sure, that accurate notions in that branch of science must prove at all times a most useful check on physiological and pathological speculations; and that, without them, an author is continually exposing himself to the risk of error.

It would be injustice to the writer not to add, that he has another merit almost as great as that of originality and accuracy. He is a very *cautious* pathologist. Conscious of the extent of his subject, and of the necessity of extensive and varied observation for its full elucidation, he confines himself to the illustration of certain positions, and makes no attempt to anticipate, by a bold hypothesis, the labours and honours of succeeding authors. The subject which he has chosen may not, at first sight, appear calculated to display, to much advantage, the peculiar talent which we are disposed to give this author credit for. The diseases of the urinary organs are few, and comparatively speaking, of rare occurrence; and the interest which attaches to them is therefore certainly less than to many other subjects in pathology; but we shall find that Dr. Prout's views have an application far more extended than could have been anticipated from the professed object of the work. They have a bearing upon *general disease*, as much as upon disease more immediately connected with a deranged operation of the urinary organs; and this we would urge as a most important feature in the character of the work which we are now to analyze.

After expressing ourselves in this manner of the author, and of the general value of his book, it may appear like



blood and urine may be best given in the author's own words.

"From the preceding sketch, we find that the most striking differences between the blood and the urine, is the complicated nature of the latter. The astonishing variety of substances formed from such a paucity of materials, naturally leads us to reflect upon the vast extent of the operation of the kidneys. On considering, however, a little more attentively the nature of the operations of these organs, we shall find, as Berzelius has justly remarked, that *acidification* constitutes the chief feature in them. Thus, the sulphur and phoshorus of the blood are converted by the kidneys into sulphuric and phosphoric acids: a new acid, the lithic, is generated altogether, &c. Such, then, evidently is the natural and healthy operation of these glands. We find, however, that in certain forms of disease, this acidifying tendency is carried to excess, and nitric acid, oxalic acid, &c. are produced. On the other hand, it is occasionally suspended, diminished, or altogether subverted; and unchanged blood, or albuminous matter; neutral substances, as urea, or sugar; or even alkaline substances, as ammonia, lime, and magnesia, are separated in abundance; and the phophorus and sulphur at the same time pass through the kidneys without being acidified. With respect to the character of the diseases attending these states of the urine, it will be generally found, that when acids are generated in excess, the urine is commonly small in quantity, and high coloured, and the disease inflammatory: when neutral or alkaline substances, the urine, on the contrary, is generally pale-coloured, and larger in quantity; and the diseases are those of irritation and debility." P. 31.

After acknowledging the difficulty which exists, in the present state of our knowledge, of devising an unexceptionable mode of classing the diseases connected with morbid states of the urine, the author assumes as the basis of his arrangement the simple principle of the *solubility* or *insolubility* of the principles met with in urine. He divides his subject accordingly into two sections; the first including *diseases in which principles soluble in the urine are morbidly deranged in quantity or quality;* the second, *diseases in which principles insoluble in that secretion are similarly deranged.* Under the first of these general divisions he arranges—1. Various forms of albuminous urine. 2. Anonymous diseases, in which the characteristic symptom is an excess of urea. 3. Diabetes. Under the second, all the various forms of gravel and calculus. As a general principle of primary importance in all diseases, it is then urged that the mere circumstance of a *diminution* or *increase* in the flow of urine will seldom fail to furnish us with a clue to the actual condition of the system, and consequently to the principles upon which a disease is to be treated. A

diminished flow of urine accompanies an inflammatory state of the general system. An increased flow of urine, (or diuresis) very constantly accompanies the state of nervous irritability. As we proceed in the analysis of the work, it will naturally occur to our readers that there is more science in the system of the professed *water-doctors* than the world has yet had the charity to allow them.

These remarks are introductory to the consideration of *albuminous urine*, with which the author sets out. That urine often contains a large quantity of congulating matter, albumen, has been long known, and the fact was lately urged upon the attention of practitioners by Dr. Blackall, as one of great importance in the diagnosis and treatment of dropsies. It has hitherto been always imagined that the urine is rendered albuminous by the serum of the blood. Dr. Prout, however, is strongly inclined to believe, that it is derived immediately from the chyle. He has observed that the albumen of the chyle differs in its chymical characters, as well as in its sensible properties, from that of the blood; and that the albumen found in urine is most generally similar to the former. The occasional presence of chyle in the urine is the chief novelty in the pathological views which the author gives us in this first chapter; but there are several interesting particulars here brought forward regarding the albuminous condition of the urine, and the states of the system in which it is observed, which it is also necessary to advert to.

In almost all cases of albuminous urine, the usual principles found in this secretion, (urea, lithic acid, &c.) are deficient in quantity. Hence albuminous urine scarcely ever exhibits a pink sediment. Dr. Wells, indeed, observed two instances of such an occurrence; but it is undoubtedly very rare. Urine which is passed some length of time after a meal is always the most loaded with albumen. One instance is recorded, (page 41,) where the urine, passed in the evening, after an early dinner, became, on cooling, a solid coagulum, assuming the shape of the vessel, and resembling blancmange. This albuminous condition of the urine occasionally exists in the most healthy, and often unsuspected. The constitutional symptoms which attend it are seldom severe, and may be characterized as unpleasant rather than dangerous. In a case recorded by Dr. Wells, the disease continued for nine years. When such a state of the urine is *permanent*, and *excessive*, it necessarily indicates some great derangement of the animal economy. The symptoms attending it are stated to be as follows—

"In slighter cases there is generally a frequent desire to pass water, and for the most part decided diuresis. I have never known albuminous urine attended by positive pain, though the patient, for the most part, complains of certain indescribable sensations, which render him conscious that all is not right. In severe cases, where the drainage from the system is greater than natural, there are, as might be expected, an inordinate craving for food, and other symptoms somewhat resembling diabetes." 39.

Such a condition of the urine appears to be excited by a variety of causes, though in many instances its origin cannot be ascertained. The author has observed it to follow a long course of mercury, the use of stimulating diuretics, exposure to cold, and violent passions of the mind.

The author evidently distrusts Dr. Blackall's views of the pathology of albuminous urine, or rather, we should say, Dr. Wells's, for we are informed (page 48) that the notion of albuminous urine being connected "*with too great action in some part of the system*," originated with that author; yet with his characteristic caution, he refrains from giving a decided opinion on the subject. He does not deny that there may be cases where the urine is albuminous, in which blood-letting is useful, but he questions very much the propriety of the practice, whether in dropsy or any other disease, upon the *mere* ground of the urine being albuminous. That irritable state of the whole system, and especially of the kidneys, which usually attends the separation of albuminous urine, appears to the author to indicate the use of sedatives, and especially of opium; but he qualifies this afterward by saying that albuminous urine does not, in the present state of our knowledge, lead to any particular remedy or mode of treatment. Now we may as well take this opportunity of observing, that Dr. Prout appears to us to have an overweaning fondness for this principle of irritability, and its usual result, the general practice of exhibiting opiates, for which we know not how to account. This seems to us, indeed, to be the leading error of the author. We shall have occasion to find him alleging the existence of the same condition of the system, and recommending a similar practice, in almost every disease of which he treats. We cannot persuade ourselves that he is always borne out in this by the symptoms, even upon his own showing. In the case of *albuminous urine*, for instance, the only symptoms noticed are a frequent desire to pass water, and a degree of inordinate appetite. Yet these are at once declared (page 39) to be *symptoms of irritability*, and to *indicate the use of sedatives*.

Chap. 2. treats of those diseases in which an excess of

urea is the characteristic symptom. As they have never yet received any name, nor excited any attention among pathologists, we think it may be advisable to point out in what manner this symptom is to be ascertained, and judged of, in order to direct the attention of our readers towards it in any obscure case which may come under their notice.

A little urine is to be put into a watch-glass, and we are to add to it carefully nearly an equal quantity of pure nitric acid, which, from its greater specific gravity, will subside to the lower part of the glass, allowing the urine to float above it. In healthy urine, the acid and the urea do not act upon each other until the urine is concentrated by evaporation. In certain diseased states of the urine, however, this occurs without evaporation, or what the author calls *spontaneously*, and a crystalline compound results. This happens where the urea is in excess. "The difference (*degree*) of excess can be inferred, near enough for practical purposes, by the greater or less time which elapses before the crystallization takes place, which may vary from a few minutes to two or three hours." (Page 11.)

The diseases in which an excess of urea may be considered in some degree as characteristic, have been sometimes denominated diabetes insipidus. They differ, however, considerably from genuine diabetes, though the *quantity of urine* voided is for the most part above the natural standard of health. The average specific gravity of the urine in these complaints may be stated at 1.020; most generally it is pale, but in some instances it has been observed high-coloured, resembling porter, more or less diluted with water. It is very prone to decomposition, becoming speedily alkaline, especially in warm weather.

The principal symptom of the affection thus characterized is a frequent and irresistible desire of passing water, both by night and day. There is occasionally a sense of weight or dull pain in the back, with irritation about the neck of the bladder, extending in some cases along the urethra. But the negative symptoms of this anonymous disease are the most interesting. The functions of the skin are unimpaired. The pulse is not affected. There is no thirst nor craving for food, (except in severe cases.) The tongue is clean. The bowels regular. It has chiefly occurred to the author to observe it in persons free from gout, or any organic defect in the urinary organs. In every instance they applied for medical advice from the dread of its ending in something worse, rather than from actual suffering. The causes of this particular state of the urine are unknown. The author conjectures that whatever debilitates may lead to it. He

has had no opportunity of ascertaining the progress of the disease, but he thinks it extremely probable that some may terminate in diabetes, and others in a deposition of the earthy phosphates. He recommends sedatives, and particularly opium, as "the only efficient remedies;" but by these he considers it probable that the disease may, in most instances, be suspended, if not altogether removed.

The third chapter treats of the very interesting subject of diabetes. We fully concur with the author in the necessity of confining this term to those affections in which the urine is saccharine. A vast number of diseases are accompanied by a large flow of urine. Some of these are of a temporary and local nature; others are more permanent; and if these are all to be called *diabetes*, we may despair of ever improving the pathology or treatment of the formidable disease to which that term does certainly more strictly apply. We do not think there is any thing very new in the author's observations concerning diabetes, but it is interesting and instructive to view this disease in conjunction with others with which it is liable to be confounded—to view it as one of a series, and not as that isolated complaint, in which light, as it appears to us, pathologists have hitherto been contented to view it.

The author is indebted to Dr. Watt, of Glasgow, for the detail of symptoms; and to Dr. Henry, of Manchester, for a very useful table pointing out the quantity of solid extract contained in urine of given specific gravities. To show the value of this table, we may mention that we are at present in attendance on a diabetic patient, who passes ten pints of urine per day of the specific gravity 1.039, as determined by Mr. Faraday. By consulting this table, we perceive that he voids sixteen ounces of solid matter in twenty-four hours.

The observation of this case enables us to point out one peculiarity in the symptoms of diabetes, which Dr. Prout overlooks. He tells us that the taste of the urine is always decidedly saccharine, in a greater or less degree. Now in the case just mentioned, the saccharine taste was so obscured by urea and the saline principles (always present in diabetic urine, though in diminished proportion) as not to be perceptible until the urine was concentrated to a considerable degree by evaporation.

Diabetes has been known, according to the author, to terminate in three ways; the first and most common is by pulmonic symptoms, accompanied by hectic fever; the second is by dropsy; while, in a few cases, the patient has been cut off suddenly. In investigating the pathology of

diabetes, the first question that occurs is, whether the increase in the *quantity* of the urine is owing to its saccharine condition, or is dependent on some other cause. The author inclines to the idea that it is independent of the change of quality in the urine, and probably referable "to that irritable state of the system which forms a part of the disease, and which resembles that peculiar condition sometimes present in hysteria and other nervous affections, in which a large flow of limpid urine frequently takes place." (Page 65.) Some of the constitutional symptoms attendant on diabetes are, perhaps, owing to the saccharine condition of the urine, but many of the most distressing are more probably referable to that enormous drainage from the system, both of solid and fluid matter, which takes place when the disease is severe.

The distinction between the increase in quantity and the alteration of quality in the urinary secretion occurring in diabetes, is stated (page 67) to be very important with reference to the operation of remedies. Animal diet affects (diminishes) the quantity, but we are not authorized to say, from observations yet made, that it improves the quality of the urine. "Blood-letting stands precisely in the same predicament." "I think, however," adds the author, "that there are stronger grounds for presuming that blood-letting has improved the quality of the urine, than that animal diet has produced this change."

Long before Dr. Prout had written upon, or, perhaps, directed much of his attention to, the disordered conditions of the urinary secretion, opium had been recommended for the cure of diabetes; and this is considered by the author as affording some countenance to his view of the disease. He tells us (page 76) that "we have abundant proofs of the power which opium possesses of effecting changes in the urine which appear to be of a curative nature." He agrees with a late writer on the subject, Dr. Elliotson, in thinking that the three remedies, animal diet, blood-letting, and opium, do not interfere with each other; and he coincides in the recommendation of having recourse to them conjointly. Now really we are at a loss to understand this system of blowing hot and cold with the same breath. That bleeding may be adapted for one patient, and animal diet for another, we can readily believe; nay, we shall find no difficulty in seeing how they may be employed with advantage in the same individual in different stages of the complaint; but that they can be mutually serviceable at the same instant of time, is what we cannot comprehend. If they can be made so in diabetes, we do not see why they should not

be united with equal advantage in the treatment of pneumonia.

By way of conclusion to the first section of the work, the author points out the analogy subsisting between the three morbid conditions of the urine already noticed; and attempts to show that the bond of connexion between them is a kind of *hysteric* irritability of the system. He thinks it probable that in some instances they gradually run into each other, or into a fourth state of disease closely allied to the same class, to which, in a strictly natural arrangement, he should next have proceeded, viz. *the deposition of the earthy phosphates*. For particular reasons, however, he separates their consideration; but as we are not tied down by the same necessity, and as our chief object is to illustrate principles of pathology, we shall here briefly notice the author's very ingenious ideas concerning the deposition of the phosphates. To use his own language, we shall sketch an outline of the *phosphatic diathesis*. (Chap. 5. Sect. 2.)

It consists in a suspended or diminished action of the usual acidifying powers of the kidney, whereby, instead of lithic acid, a greater quantity of urea, (equivalent to ammonia) lime, and magnesia is generated. This condition of the urine is very commonly dependent upon a deranged state of the chylopoietic viscera; frequently, too, it is connected with a great degree of *irritability* and *debility* of the system. Hence it is that children are so liable to this form of deposite, from their extreme irritability, and great tendency to disorders of the stomach and bowels.

The deposition of the phosphates is attended with uneasiness about the loins, a sallow, haggard countenance, black, clay-coloured, or yesty stools, and subsequently great languor and debility, as in diabetes. The urine too here, as in the diseases already treated of, is pale, and secreted in larger quantity than natural, but it is commonly of very low specific gravity, such as 1.002. When the specific gravity is greater than this, the phosphatic sediment is proportionally more copious. In this state of disease the urine is very prone to decomposition. It speedily emits a nauseous smell from the evolution of ammonia. The relation between this state of disease and the three formerly noticed, is considered to be established by these points of analogy. But to understand the full scope of the author's views regarding the deposition of the phosphates, it is necessary for us to go back to the commencement of the second section, in which those diseases are treated of, characterized by derangement, either in point of quantity or quality, of principles *insoluble in the urine*.

The first chapter gives a general description of the mechanical deposites which take place from urine, either within or without the body. They are of three kinds:—1. The pulverulent or amorphous sediments; 2. Crystalline sediments, usually denominated gravel; and 3. Solid concretions, or calculi, formed by the aggregation of these sediments. A summary account is given of the varieties of urinary gravel and calculi, with their chymical composition, chiefly extracted from Dr. Marcet's excellent essay "On the Chymical History and Medical Treatment of Calculous Disorders;" but as our readers must have been made familiar with this branch of the inquiry by many recent publications, we pass it over in order to afford more space for subjects less generally known.

The second chapter is a very interesting one. It is occupied with data, derived from the examination of different collections, showing the comparative prevalence of the different forms of urinary deposite, and the order of their succession. Upon these data are founded a series of observations illustrative of the general pathology of calculous disorders.

In common with all writers on this subject, Dr. Prout lays great stress on the universality of the lithic acid, either as the nucleus or as the body of the calculus; but he says, that it is by the examination of the *alternating calculi* that a true notion is to be formed of the pathology of this disease. He investigates the *modes of transition*, by observing the different layers in contact with each other, and appears to us to have arrived, in this way, at some very important results.

The transition from the formation of lithic acid to the deposition of the phosphates is most interesting and instructive. It takes place gradually through the lithate of ammonia, and is accompanied by the disappearance of the usual colouring principle from the urine. The transition from the mulberry calculus to the phosphates takes place through a mixture of oxalate and carbonate of lime. The next layers are found to consist of the carbonate and phosphate of lime, and still farther from the centre, the carbonate of lime disappears. The author is inclined to believe, that wherever the change takes place *ex abrupto*, it is presumable that some time must have elapsed between the deposition of the different matters. It is a curious and important feature in the pathology of the urinary system, that a *decided* deposition of the phosphates is never followed by a different deposite. The author evidently distrusts altogether the existence of what have been called compound

calculi—that is, calculi where different ingredients are intimately mixed. A comparison of the different varieties of calculi shows that there are three primary and essential distinctions among them, and these the author next treats of under the denomination of the three forms of calculous diathesis. He calls them (rather quaintly to be sure) the lithic acid diathesis, the mulberry diathesis, and the phosphatic diathesis; and a separate chapter is allotted to the consideration of each.

Lithic acid diathesis.—Lithic acid is separated from the urine in two forms, amorphous and crystallized—in common language, as *sediment*, or as *gravel*. In the first form it is in combination with ammonia; in the second, pure. An excess of lithic acid in the urine arises from simple errors in diet, unusual exercise, or any debilitating circumstances. The speculations in which the author indulges, as to the manner in which these causes act, do not appear to us very satisfactory. The important principle seems to be this; that, if *imperfectly assimilated*, or *unnaturally albuminous* matter is brought to the kidney, it does, and must, in virtue of its natural action, convert such imperfect albumen into lithate of ammonia.

Dr. Prout divides the *sediments* of urine into three classes: the yellow, the red, and the pink; and attaches to this a much higher degree of importance than we are inclined to think it merits. The circumstances that chiefly struck us as worthy of notice are the following:—The yellow sediments consist of the lithate of ammonia tinged by the colouring principle of the urine. They are the sediments of health, or of the slighter forms of dyspepsia. Some persons are far more liable to them than others; and this denotes a tendency in such constitutions to an *excess of lithic acid and its consequences*. Red or lateritious sediments consist of the same matter tinged partly by the colouring principle of the urine, and partly by the *purpurates* of soda and ammonia. They occur in persons of a feverish irritable habit, and in such are excitable by trifling causes. They may be observed also in gout, rheumatism, and hepatic affections. Pink sediments are characterized by being coloured *wholly* by the purpurate of ammonia. The presence of the purpurates is a never-failing test of the presence of feverish or inflammatory action. Pink sediments accordingly occur in all inflammations, but they appear also in a very pure form in hectic fever, chronic liver disease, and frequently in dropsy. Sediments in the urine properly belong to the sweating stage of fever. They point out that fever has existed and is going off, rather than its actual presence.

The pathology of *gravel* next comes under consideration. After a good detail of the symptoms attending a fit of the gravel, the author proceeds to notice the circumstances under which crystallized deposites take place from the urine, and he observes that they are of two general descriptions, *natural* and *acquired*. The tendency to them is not unfrequently hereditary. "On the other hand, the disposition to generate these sediments in excess is, like gout, or rather simultaneously with gout, but too frequently acquired by indolent habits, and excess in eating and drinking." It is connected also with certain unknown causes, by which it becomes endemic in certain districts, "as for example, that of which Norwich may be considered as the centre, in which more calculous cases occur, than in the whole of Ireland or Scotland." Lastly, we are informed that renal calculi are sometimes owing to organic disease of the kidney, or parts connected with it. (Pages 130 and 183.)

After a few remarks on the prognosis in this form of disease, the treatment proper to be pursued, where a lithic acid diathesis prevails, comes under consideration. Errors in diet are, of course, to be chiefly guarded against, but we are warned that errors in *quantity* are of infinitely more importance than errors in *quality*. Where a strong disposition exists to the formation of gravel, alkalis are indicated, "*but they are seldom or never to be given alone.*"

"To be really useful," adds our author, "they must be conjoined with alteratives and purgatives. The pil. submur. hydrarg. comp. or a pill composed of the pil. hydrarg. and antimonial powder taken at night, and followed up the next morning with a solution of Rochelle salts and carb. of soda in a bitter infusion, may be had recourse to. A little of the same mixture may be taken two or three times a day, so as to keep the bowels fairly open; or, instead of this, a little magnesia may be taken in a glass of soda water, as often as it may be found necessary. This plan is to be persisted in for a considerable length of time, according to the severity and obstinacy of the symptoms; the alterative pill being gradually had recourse to at longer intervals, and the doses of the other medicines diminished in a corresponding manner." P. 140.

In a fit of the gravel we are directed to begin by the employment of febrifuge means, before recourse is had to stimulating diuretics; the author having seen great mischief done by a contrary system, "the sufferings of the patient aggravated, and even his life placed in extreme danger." (Page 141.) If the case is very obstinate, or suspected to be accompanied by some local disease of the kidney, we are advised to apply a galbanum plaster to the loins, or to insert an issue or seton.

The fourth chapter is chiefly dedicated to the *mulberry* diathesis. Our knowledge concerning it is small, but the author conjectures—1. That the formation of oxalate of lime by the kidney is connected with a distinct diathesis, *excluding the existence of other diatheses.* 2. That this mulberry diathesis is of the same *general nature* as the lithic acid diathesis. 3. That oxalic acid is here generated instead of lithic acid; and that it is actually secreted by the kidney, and not formed there, as some have conjectured, by the agency of nitric acid.

Calculi, composed of the cystic oxyd, are rare, but always exceedingly pure. Hence the author conjectures, that the *cystic diathesis* is more exclusive than any other, and that it does not readily *pass* into any other.

We have already alluded to some of the author's ideas regarding the *phosphatic*, or earthy diathesis. On this subject he is certainly at variance with most of our approved writers on calculus. One of the principal points of difference between him and them, (more particularly Dr. Marcet and Mr. Brande) seems to be this:—The latter have long taught us that a tendency to phosphatic deposition is given by a long course of alkaline medicine, and this opinion, we are quite satisfied, has done far more to sway the practice of the present day in gravelish complaints, than any other we could name. Now upon this Dr. Prout lays no stress at all. He allows that in a few cases it may occur, but as a general principle in the pathology of earthy depositions from the urine, he considers it of no importance whatever. The real causes of this state of disease are, he says, either local or general. A large proportion of the cases are owing to some injury of the back. It is an old observation, that such injuries produce alkaline urine. Excessive fatigue, severe and protracted debilitating passions, are among the other general causes of the affection. *Its principal local causes are irritations about the bladder or urethra, especially when operating for a considerable length of time.* This appears to be the leading feature in Dr. Prout's views of the phosphatic diathesis. It is certainly deserving of remark, that the same view of the subject had long ago been taken by Mr. Murray Forbes, who expressly states, that "when a foreign body gets into the bladder, *it would operate by irritation*, so as to occasion a redundancy of the phosphates."

Phosphatic deposites from the urine are sometimes amorphous, sometimes crystallized. One of the characteristics of this diathesis is, that the urine, on standing for a short time, exhibits the appearance of an iridescent pellicle, consisting of minute crystals of the triple phosphate.

In such a condition of the urine, the indications of cure are—1, to lessen the irritability of the system by narcotics, and especially by *opium*, in large and repeated doses; 2, to restore the general health by tonic, and other appropriate remedies. He particularly recommends the mineral acids, uva ursi, bark, and chalybeates. Purgatives, he says, should here be used *with great caution*, except in children, and those slighter cases where the strength of the system is not much diminished. This may be judged of, by the specific gravity of the urine being in such cases comparatively high.

"In mild incipient cases, I have seen the greatest advantage from the combined use of the muriatic acid, hyoscyamus, and uva ursi; conjoined with the use of alterative purgatives." 162.

In opposition to the French writers, Dr. Prout is not disposed to lay any great stress on *diet* in a case of phosphatic diathesis. He considers the quiet of mind of the patient of far more consequence, and urges forcibly that

"Absence from care, the exhilarating air of the country, and such exercises as are consistent with the patient's condition, will perhaps more than any thing else, contribute to the cure, particularly in the slighter cases, and when the cause is not local injury." 163.

The next subject which engages the attention of the author is that of calculi, considered in a *mechanical* point of view;—that is to say, with reference to their modes of formation and subsequent increase, the symptoms which they produce as solid foreign bodies in the different urinary passages, and the medical treatment to be adopted when they are lodged in different situations.

We are not much pleased with the laboured theory which the author throws out in page 182, to account for the first formation of renal calculi, whether lithic or mulberry. His idea is that they are thrown out in a plastic *hydrated* state, but we cannot avoid expressing our persuasion that this speculation is unnecessary. It does not appear to us to add any thing to general pathology, and it is clearly inapplicable to practice. After noticing the treatment to be pursued in a case of renal calculus, the author is led to consider the growth of the stone, when in the bladder; and here we were struck by an observation which appears to us very questionable. We are told, (page 195,) that the *laminated* structure of calculi shows that their formation has been interrupted—in other words, that it has taken place at distant intervals; for, adds the author, if a calculus was constantly increasing, its texture should be homogeneous. He afterward compares the structure of a calculus to that of an

onion. Does he suppose that the concentric laminæ, which that bulb exhibits, prove "that they were formed at different periods, separated by longer or shorter intervals?"

Whatever may have been the previous nature of the calculus, the *phosphatic diathesis always prevails whenever the patient's general health gives way.* The coats of the bladder then become thickened and diseased, and often, he might have added, disorganization of the kidney itself takes place, and death closes the scene.

The *local* treatment of calculi is nearly the same in all the species, consisting principally in the employment of anodynes. "Hyoscyamus is in general to be preferred in the lithic acid diathesis, and opium in the phosphatic." (Page 202.) This is urged in consequence of the author's having noticed, that "opium frequently increases the formation of the lithic acid," (page 177,) an observation which we think of great importance, considering his extensive recommendation of this remedy in the diseases of the urinary system.

The *general* treatment depends, of course, upon the nature of the diathesis which is present; and it may be understood from what has been already stated. It is important to bear in mind, that while the urine is in its natural state, *the calculus cannot increase in size.* When, therefore, the diathesis, more particularly the lithic diathesis, has been broken in upon by medicine, the effect is to be kept up by strict attention to diet and regimen, and the patient may live on, scarcely knowing that he has a calculus in the bladder.

In the cure of a calculus composed of the phosphates—

"It should be our object, as in all other affections of this description, to restore the urine as speedily as possible to its natural state. I am sorry, however, to be obliged to confess that I have never been able to accomplish this purpose in a single instance, even after the most fair and persevering trial of almost every remedy that has hitherto been recommended, or that I could devise as likely to effect my purpose. The consequence has been, that I have never been able to procure more than a temporary relief from suffering by the various exhibition of opiates, &c. The operation of lithotomy, therefore, seems to be the only alternative in this form of the disease. If, however, the case is doubtful, or the patient refuses it, or his situation will not admit of the performance of the operation, recourse may be had to the means formerly pointed out when the nature of this diathesis was treated of in detail." 206.

The last chapter contains a number of valuable observations on the influence which periods of life, sex, and climate, exert over calculous complaints; on the mortality attending lithotomy, and the circumstances *of a general nature*, which

should incline us to recommend, or to dissuade from, that operation. We have occupied so much space with the author's general views, that we have really no room to spare for the details into which we should be led by a full analysis of this chapter. There are two or three remarks, however, which we noted down as particularly interesting, for which we must endeavour to find a place.

Dr. Prout seems to think (page 211) that a large proportion, perhaps the majority, of lithic acid calculi are formed in *very early life;* and that no urgent symptoms are occasioned by them till towards the age of forty.

"The heyday of life has now past; the individual has perhaps been married for some years, and, from being less active, has become corpulent and gouty; for some time past the irritation in the bladder has been more frequent and urgent, and he observes that his urine is loaded with gravel; he now begins to take the alarm, and to be apprehensive that his complaint may terminate in stone; a surgeon is consulted, who confirms his apprehensions; and here begins the tale of wo; his new disease haunts him perpetually, and soon begins to affect his health and spirits; at length his constitution gives way—an irritable state of the system comes on—the phosphatic diathesis is induced, and a cruel operation, or a miserable death, is the only alternative." 213.

The phosphatic diathesis occurs sometimes as an original disease in the prime of life, without being preceded by the lithic acid, or any other diathesis. (P. 215.) Calculus is less frequent at present than it was formerly. (Page 216.)

The operation of lithotomy is to be recommended without delay, whenever a calculus, no matter of what species, is ascertained to exist in the bladder before puberty—where the phosphatic diathesis is fairly formed—and, lastly, when the urine is loaded with pale-coloured lithate of ammonia; for in this case the phosphatic diathesis cannot be prevented, nor the lithic diathesis restored. On the other hand, the operation may be postponed, when the calculus is small and the lithic diathesis *steadily present*—when the patient is in the prime of life and the health sound, and where he is willing to conform to regular living. Under all other circumstances the retention of the calculus in the bladder is dangerous.

Before parting with Dr. Prout, we must offer him our thanks for the instruction which he has afforded us; and, *for his sake*, express our hopes, that we may have been successful in conveying to our readers a clear and impartial idea of the views which he has formed of the deranged operations of the urinary organs.

VIII.

A Synopsis of the Diseases of the Eye, and their Treatment; to which are prefixed, a short Anatomical Description, and a Sketch of the Physiology of that Organ. By Benjamin Travers, F.R.S. Surgeon to St. Thomas's Hospital. One vol. 8vo. pp. 425, six plates, 32 beautifully coloured engravings. London, 1820.

"Vel me monere hoc, vel percontari puta:
"Rectum est, ego ut faciam; non ut deterream." *Ter.*

We believe we shall be credited when we declare that our analytical labours are generally performed "*con amore*," and without any of those feelings of languor, dejection, and disrelish which must often oppress the author whose hard fate it is "to force a churlish soil for scanty bread." Yet we are compelled to confess, however reluctantly, that the perusal of some works puts our patience and our temper completely to the test, whether by generating a great flow of bile, and corresponding irritability of mind;—or by enveloping us in a kind of Beotian atmosphere that stupifies us for a time, until we are enabled to emerge into the cheerful sunshine of intellect once more. On the other hand, when we meet with a work of sterling merit, and at the same time, well arranged and well written, we enjoy at least the "feast of reason," if not the "flow of soul;" and it need hardly excite surprise if, in such cases, we prolong the genial banquet to a late hour, from a consciousness that such treats must be comparatively few in our literary journey through life.

We feel ourselves under deep obligations to the ingenious and able author of the work before us, and the profession will undoubtedly appreciate the valuable mass of facts and observations which Mr. Travers has here presented them from extensive personal experience—being, indeed, "the result of a more ample opportunity of observing the diseases of the important organ of which it treats, than commonly falls to the lot of hospital surgeons." This opportunity is derived from a period of seven years official situation as surgeon to the London Infirmary for Diseases of the Eye, besides a wide range of private practice. Our author is of opinion, that "the advantages obtained by the subdivision of professional talent and labour, are infinitely overbalanced by those which arise from the general and undivided application of these instruments of knowledge;" and he thinks

this doctrine is strikingly illustrated by the prejudice arising to ophthalmic science in this country, from the confinement (formerly) of that branch in the hands of a few. This is now at an end, and the *respectable* exclusive oculist will be a name unknown in the next generation. The institutions for treating ophthalmic diseases are now conducted by such distinguished and zealous medical officers, and are disseminating ophthalmic knowledge so widely through the profession at large, that all mystery or pretensions to exclusive superiority must fall, as a matter of course.

The invaluable work before us is divided into three parts: the 1st, dedicated to the ANATOMY and PHYSIOLOGY of the eye and its appendages—the 2d, to the PATHOLOGY of the membranes, humours, and appendages of that organ; and the 3d, to the TREATMENT.

The anatomical portion occupies forty-four pages, and presents an animated, yet exceeding chaste and terse, delineation of all that is interesting to be known, or necessary to be remembered, of the structure of the parts, without wasting his own time, or perplexing the reader, by uselessly dividing, and tiresomely naming the "ravellings of minute anatomy." Into this part of the work we cannot be expected to enter. About an equal space is devoted to the *physiology* of the eye and its appurtenances, and to it we may apply the same observation as to the anatomical section.

The first chapter of the SECOND PART of Mr. Travers's book embraces the pathology of the membranes, and is divided into five sections, viz. on the Conjunctiva—Cornea—Sclerotica—Choroid and Iris—Retina. These sections we shall notice in their order.

1. *Conjunctiva.* After some anatomical observations on the vessels supplying the conjunctiva, as derived from two sources, the palpebral and ophthalmic muscular arteries, but very freely inosculating with each other, our intelligent author remarks, that, though in a tranquil and healthy state of the eye, little, if any, red blood is admitted into the superficial vessels, yet, under a very temporary excitement, the red fluid enters them on the sclerotic conjunctiva. It is wisely ordered, however, that the condensed connecting texture upon the cornea prevents the admission of red blood into *its* vessels, even under a very high degree of inflammation. Mr. Travers avers, that the susceptibility to increased vascularity of parts, under excitement, "is in proportion to the quantity of cellular texture entering into their composition, or connecting them with subjacent parts." For an elucidation

of this he refers to a comparison of the faucial and tracheal membrane with the pleura—the periosteum with the lining membrane of the veins and arteries.

The admission of red blood, then, into the *sclerotic* conjunctiva marks pretty accurately the progress of inflammation; while the first effect of this disease upon the *cornea*, is haze or dimness, depending on a loaded state of its serous vessels. This dimness is immediately removed by rebalancing the circulation, or removing the irritation destroying that balance. Transient dimness, in fact, is merely "a condition of congestion;" but, if continued for a certain time, produces a deeper and more permanent opacity, viz. effusion into the connecting texture, and thickening of the conjunctiva upon the cornea. The peritonæal, arachnoid, and synovial membranes, probably exhibit the transient and permanent opacity, in the distinct stages of congestion and effusion. The epidermis, in the state of blush and incipient vesication, forms a striking contrast to the above.

"The conjuctiva is to the cornea, what the periosteum is to the bone. It nourishes the superficial lamellæ; wherever it is completely detached, the exposed surface of the cornea ulcerates, and its vessels repair the breach. To pursue the analogy, the interlamellar texture of the cornea may represent the medullary membrane; gangrene therefore does not ensue but from a permanent destruction of both textures, as by blows and explosions, which mechanically disorganize; by the action of lime, gunpowder, strong acids, and other chymically destructive agents; or by the strangulation of the vessels of both textures, as in the excessive chemosis, which destroys on the same principle as the paraphymosis, or the strangulated hernia." P. 91.

The characters of *local and healthy* inflammation of the eye are well known, and exhibit the simplest example of the disease; but this phlogosis is much modified by certain constitutional causes or dispositions—as for instance, struma. In *this* case, (where it has not proceeded to change of structure) the vascularity is inconsiderable. It is marked by great intolerance of light, and, in its simplest form, is almost peculiar to children—stationary—marked by a very slight redness of the sclerotic conjunctiva—and the highest degree of morbid sensibility to light, which, Mr. Travers observes, is purely a disorder of function, never impairing the faculty of vision, though far exceeding that which accompanies the acutest inflammation to which the eye is liable.

"I attribute it," says this acute pathologist, "to a morbid sympathy of the retina with the secreting surfaces of the primæ viæ and the skin, for neither of these organs perform their healthy functions during its existence. The tongue, the index of the former, shows

by various signs gastric irritation or disordered digestion, and the cutaneous surface is remarkably dry and harsh. Accordingly it is cured by diaphoretics, as tartar emetic to nausea, James's powder, or calomel combined with opium in small doses; by the warm bath; and materially corrected, if not removed, by a preternatural secretion in the vicinity, as by an open blister on the nape of the neck. I have often seen an aggravated intolerance removed in twelve hours by the application of a blister." 93.

Other organs of sense, as of the hearing and smell, are sometimes rendered morbidly acute, analogous to the above-mentioned state of the eye, and that without any organic change.

The nebula and pustule of the corneal conjunctiva are the terminations of this inflammation, when texture is affected —to which may be added the small herpetic ulcers, reddish brown points, giving to the cornea a scabrous appearance. Aphthæ or pustules are disposed to form on the sclerotic conjunctiva, at or near the verge of the cornea, and not dissimilar, in some cases, to those affecting the mouth, fauces, and intestinal canal. On the cornea, pustules are more rare, except in children; and, like the aphtha affecting the glans penis or fine cutaneous textures, usually terminate in an ulcer.

A puriform discharge, in ophthalmia, is furnished by inflamed meibomian follicles and the conjunctiva bordering them, in the same manner as the lacunæ of the urethra, and the mucous glands of the nares, fauces, rectum, vagina, &c. pour forth a similar fluid, when mildly inflamed—while in vehement acute inflammation of these parts the purulent matter is furnished by the villous surfaces themselves.

"The sclerotic conjunctiva in acute suppurative ophthalmia presents the following states. 1st. Serous effusion (œdema) which is common to other inflammations, and especially those of a less vigorous kind. 2d. Effusion of lymph (chemosis) peculiar to this form of inflammation, by which it acquires a solid augmentation of bulk. 3d. Villosity, or a subsequent prolongation of the extreme vessels in the form of villi, which secrete pus. The strict adhesion of the conjunctiva to the cornea prevents these changes from taking place upon that membrane. Upon the tarsi the conjunctiva thus affected becomes preternaturally vascular, thickened, and scabrous, or forms fleshy eminences. That the vascular villi of the conjunctiva secrete pus, may be ascertained by the aid of a lens. The pus, when formed, collects in the interstices of the villous texture. We have no evidence, as before observed, that the conjunctiva is a secreting surface in the healthy state." 96.

There is a mild, or intermediate form of this suppurative ophthalmia affecting principally the conjunctiva palpebralis.

while that reflected over the globe is simply intumescent. This form seldom injures the cornea, Mr. Travers thinks, but frequently leaves a granulated state of the conjunctiva palpebralis, as in the most acute form. The highly contagious character of purulent ophthalmia is well known. Our author thinks it happens twenty times under three months of age, for once after that period. Fluor albus or gonorrhœa in the mother—the transference of matter by towels, sponges, or any other vehicle, from one person or part to another, are the usual means of propagating this dire affection, which runs through armies, schools, and families; certainly contagious, but sometimes apparently epidemic.

Chemosis and ecchymosis have been confounded together by some writers; but, as will be seen in the last quotation from our author, they are widely different. It is after the effusion of lymph, in chemosis, so characteristic of purulent ophthalmia, that the conjunctiva forms "fungous excrescences, pendulous flaps, or hard rolls protruding between the palprebræ and globe, and everting the former, (ectropion,) if not protruding, causing the turning of the lid over against the globe, (entropion.)" The tarsal portion also takes on the hard granulated surface, productive of incessant irritation of the sclerotic conjunctiva, ultimately rendering the cornea opaque. Various other morbid membranous growths, referrible to irritation, are described by our author at page 99, as also the fungous conjunctiva, a firm fleshy growth projecting from between the eyelids and globe, of an orbicular figure.

The conjunctiva, like the mucous membrane of other parts, is sometimes the seat of carcinoma, which is not the case, Mr. Travers thinks, with any other structure of the eye, excepting the lacrymal gland. The PANNUS, or chronic thickening, with opacity, of the sclerotic conjunctiva, results, Mr. T. thinks, from relaxation of its subjacent connecting tissue, whereby the membrane becomes redundant in extent, and folded in duplicatures on all sides of the cornea—somewhat analogous to the elongated uvula.

"The membranous pterygium is a true nebula of the sclerotic conjunctiva; the fleshy is an adipose or sarcomatous growth beneath the sclerotic conjunctiva. It extends from either canthus or sinus palpebralis, most commonly from behind the caruncula lacrymalis; and byits increase forciblydetaches the conjunctiva from the cornea. In its progress it occasions a permanent and indelible opacity by the thickening of the conjunctiva, and the deposition of lymph in the interspace of these membranes, in the form of a little tongue-shaped process. The wedge-like figure of the fleshy pteryx, and its gradual extension upon the cornea, afford the best pathological demonstra-

tion of the continuity of the conjunctiva; and the spread fan-like figure of the membranous, its semi-transparency as well as its termination in simple nebula of the corneal conjunctiva, shows the difference in the nature of the two diseases. Both this and the disease last mentioned, like other morbid growths of the cellular texture, or beneath it, are most prevalent in warm climates." 101.

The encanthis, a morbid enlargement of the lacrymal caruncle, is extremely irritating, and occasions epiphora by a forcible diversion of the lacrymal puncta from each other, and from the surface of the globe. Mr. Travers has never known it assume a malignant character. The conjunctivæ pulpebrarum and scleroticæ occasionally adhere by membranous bands, called FRENA or FRENULÆ, forming a troublesome and often an irremediable deformity. It is not necessary that both surfaces should be wounded, in order that adhesion may take place. "The opposite uninflamed surface, as Mr. Hunter observes, accepts of the union."

"I have seen these frena produced by a slit eyelid from a fall, and trifling as the inconvenience might seem, it so restricted the motions of the globe, and the disease was so materially aggravated by operations to relieve it, *i. e.* by the multiplication of frenula, that the patient became disturbed in his intellects from an exaggerated sense of his misfortune." 104.

The sclerotic conjunctiva being a *mucous*, and the corneal a *serous*, membrane, the *former* has a tendency to suppurative, and the *latter* to adhesive, inflammation. This is their pathological distinction.

II. *Cornea.* Ulcer of this texture begins, not in abscess, but in a circumscribed deposit of lymph, or in pure ulcerative absorption, without pus, and unaccompanied by any appearance of coloured vessels. The organizing process, however, is sometimes performed by these last. The appearance of coloured vessels upon the corneal conjunctiva may be referred to one or other of the following states, viz. 1st. to the presence of adhesive inflammation excited by a pustular ulcer of the cornea—2d, to the duration of acute strumous ophthalmia, rendering the serous vessels pervious to red blood—3d, to a state of chronic inflammation, in which straggling solitary vessels, of a varicose appearance, run to one or more specks; or, proceeding from opposite sides of the sclerotic conjunctiva, traverse the opaque cornea, and freely anastomose upon it—a common sequel of purulent ophthalmia, whether accompanied or not with the granular conjunctiva tarsi. Many acute physiological and pathological conjectures are here introduced by our author, for which we refer to the volume itself.

The acute interstitial ulcer sometimes opens externally, by absorption of the conjunctiva and superjacent portion of lamellæ. Its figure is frequently crescentic, and traverses a part, or the whole diameter of the cornea. Upon close examination, the conjunctiva will be found to be absorbed at the part opposite to the ulcer, and the exposed scabrous surface of the cornea renders the motions of the upper lid acutely painful.

"The deposition of the adhesive track precedes the appearance of red vessels, which are derived to it in one or more fasciculi from the sclerotic conjunctiva, and by which its healing is perfected, as in the ulcer opening from the surface, before described." 115.

The acute interstitial ulcer, in debilitated habits of body, or when produced by considerable violence, instead of opening upon either surface of the cornea, spreads between its lamellæ—and if it occupy a large and central portion of the cornea, it usually terminates by slough of the entire membrane.

But when, as more frequently happens, the interstitial ulcer opens into the anterior chamber, HYPOPION is produced, a mixed secretion of lymph and pus—the former flaky and inorganizable, and situated exterior to the fluid.

When the cornea is perforated by external ulcer, the iris falls into the breach, and there becomes adherent, termed procidentia iridis.

"In the progress of an external ulcer to the interior of the cornea, and before it penetrates into the chamber, a remarkable appearance is occasionally presented, viz. a transparent vesicle which fills the aperture, and is supposed to be the membrane of the aqueous humour. I have never seen this state maintained: the prolapsus iridis follows in a few hours, notwithstanding the use of the lunar caustic and other stimulants. This has led me to question its being a distinct texture, and its appearance corresponds accurately to that of the innermost lamella of the cornea, which after losing its support, yields to the pressure of the humour, and assumes the vesicular form." 117.

Opacities of the cornea are of three kinds—1$^{mo.}$ thickening of the conjunctiva and effusion of adhesive matter between it and the cornea, or between the lamellæ of the latter—commonly the product of acute strumous ophthalmia. While recent it admits of removal by excitement of the absorbents, "especially by that which mercury produces." 2$^{ndo.}$ a slow change of texture without breach, "similar to that by which the pleura, or choroid, or capsule of the lens is converted into bone." The yellow pearly opacity, resembling the inside of an oyster-shell, is of this kind. It generally results from continued, or frequently relapsing strumous inflam-

mation, the layers of the cornea becoming opaque, indurated, and condensed, not admitting separation by the knife or maceration. 3^tio. new matter supplying a loss of substance in the cornea, from ulceration or gangrene. Its figure is more abruptly circumscribed than the second variety, and bears a greater resemblance to a cicatrix. The more these specks vary from a white colour, the less chance is there of reducing them.

"The peculiar hue and loss of tension, as well as lustre, of the *dead* cornea in acute suppurative ophthalmia, has been aptly pictured by Mr. Saunders, by the terms 'cindery, ragged, flocculent.' It is important, because I have satisfied myself that the first change of the cornea in this disease is purely nebulous, produced by the deposition of adhesive matter; and if the inflammation be arrested even on the verge of gangrene, the cornea is susceptible of restoration by absorption. This fact I had lately an opportunity of establishing, in the case of a lady who was rendered blind by acute suppurative inflammation of the conjunctiva: so inevitable to all appearance was the destruction of the cornea, which had sloughed in a deep sulcus at its junction with the sclerotic above, that the most experienced practitioner of my acquaintance in this branch of surgery pronounced the case hopeless and irremediable, and took his leave. The highest tonic regimen, bark, wine, and opium, followed close upon a very active and bold depletion, and the anterior chamber was fortunately and unexpectedly preserved. No sooner was a sign of the arrest of sloughing ulceration obtained, than I commenced a mercurial course; in three days the system was affected; the recovery of the figure and transparency of the cornea was rapid and complete beyond all expectation, and an equally perfect state of vision was restored and established." 120.

Gangrenous opacities of the cornea from foreign substances, destroying its texture, are sometimes superficial, and a kind of exfoliating process takes place. More frequently the disorganization is complete. Recent opacities of a diffused semi-transparent character admit of absorption. Not so where the interstitial deposition has been abundant and of long standing—and the lamellæ compacted.

Mr. Travers has seen several cases where the conjunctiva was converted into a rugous and opaque skin, knitting the lids close to the globe. There is here no secretion of tears, and our author attributes the disease to an obliteration of the lacrymal ducts from chronic inflammation of the conjunctiva.

"All stimulant substances not escharotic, applied to remove opacities of the cornea, act in the same manner as rubefacients upon the skin; they excite a temporary vascular action, which is followed by a correspondent excitement of the absorbents. I have often seen

an opaque portion of the cornea cleared by a puncture with the couching needle. If the point of salutary excitement is exceeded, the increased vascularity is permanent, and occasions increased deposition. Injections applied to ulcers do not excite the absorbent action in the same ratio, but occasion a permanent increase of the vascular action, which is here below the ordinary standard. This instance of the adaptation of the same means to different ends, according to the state of the part, is perhaps the best practical illustration of Mr. Hunter's quaint but expressive phrase, "stimulus of necessity." 121.

Mr. Travers's pathological observations on staphyloma are very acute and interesting. We can glance at but a few of them. This distressing and unsightly complaint is of two kinds, viz. from dilatation and breach of the cornea. In the first, or spheroidal staphyloma, the effect of pressure is to thicken the remaining corneal lamellæ by a deposition of adhesive matter, as in the aneurismal and herniary sacs. In the second, or conoidal staphyloma, the recently deposited matter yields to the pressure *a tergo* before its organization is complete. Sometimes the two forms are combined. The remediableness of the deformity, by an operation, depends upon a sufficient portion of the iris being left—this last being kindly disposed to granulate. "Three or four days after the operation for staphyloma, the iris is seen coalescing with the conjunctiva, and throwing up fleshy pullulations, which, contracting into a little button-like eminence, seal up and permanently secure the crystalline and vitreous humours; thus the spherical figure of the globe is preserved to support the lids." If the section be posterior to the plane of the iris, the vitreous humour escapes, the globe collapses, and sinks in the socket.

There is a curious conoidal projection of the cornea, from thinning and absorption of its interlamellar texture, rendering vision inconveniently short, so that objects, at a very moderate distance, are much confused in their appearance. It is not preceded by inflammation or any assignable cause, and no remedy has yet been found for the complaint. "But a pupillar aperture set in a black ring frame, about a quarter of an inch or more in depth, greatly assists the patient by lessening the confusedness of his vision." The presence of adhesive inflammation seems to be the chief distinction between staphyloma and conical cornea.

III. *Sclerotica.* After some acute anatomico-pathological observations, Mr. Travers goes on to remark, that when inflammation of the conjunctiva is allowed to progress, the ciliary vessels partake in the action, and give signal of this

participation by the well-known and remarkable appearance of a vascular zone at the margin of the cornea. The texture of the sclerotica, however, serves as a shield to the finer tunics, to ward off inflammation from without, as well as external violence. When inflammation has at length reached these interior tunics, the vision is affected in a much greater degree than appearances would lead one to suspect. When the sclerotica is inflamed, the vessels which pursue a straight course to the margin of the cornea are strongly distinguished. They have a somewhat darker hue than the areolar vessels upon the loose portion of the conjunctiva. Mr. Travers has seen occasionally a primary sclerotitis, unaccompanied by any affection of the iris, and with a very slight vascularity of the loose conjunctiva. The inflammation is not acute—sometimes accompanies, and is sometimes metastatic of rheumatic inflammation. It is often seen with eruptions and sore throat of a pseudo-syphilitic nature. This coat sometimes yields in spheroidal staphyloma.

IV. *Choroid and Iris.* When the vascular zone at the margin of the cornea, before alluded to as indicative of sclerotic inflammation, is accompanied with dulness of the humours, a spastic contraction, or a very sluggish and limited motion of the pupil, impatience of light, and dimness of vision, we may conclude that the choroid and iris partake in the inflammation. The above indications are still farther confirmed by the presence of an habitual aching pain in the globe of the eye, forehead, and orbit, together with hair-like red vessels on the iris, and specks of extravasated blood in its substance. Adhesive inflammation takes place between the fibres of this muscle; the pupil loses its thin flowing edge, and becomes stunted, and gibbous. IRITIS of moderate acuteness is often unaccompanied by any other appearance of inflammation; there being no distinct deposit of lymph, its deposition being rather inferred from the fixedness or slight change of figure in the pupil, than actually demonstrated. In this form, there is such an evening, or early morning axacerbation of pain, as compels the patient to get up, and even totally to deprive him of rest.

"Sometimes the pain affects the whole corresponding side of the head. In other instances, it is confined to the eyeball and its immediate vicinity, as the forehead, and temple, and bones of the cheek. The sensation is sometimes that of pulsatile pain, marking every injection of the ophthalmic artery, as of the radial artery in a whitloe. A sense of continued pressure or constriction, as from extreme distention of the vessels, is a more common character of the patient's sufferings. In the vehement acute iritis, lymph

is variously deposited upon the face of the membrane, in small tufts here and there, or larger tubercular masses. The pupil in this case is usually much mishapen, being rendered angular at those points of the circle at which the deposit has taken place, or is most abundant. Its aperture is sometimes partially covered, and sometimes completely blocked by a deposit of lymph. The pain, in this state, is not always augmented in proportion. It affects more the head than the organ. The vision is nearly, if not quite extinguished. The appearance of a stratum of lymph, coating the face of the iris, with a turbid state of the aqueous humour, belongs to chronic inflammation, which tends to opacity of the capsule of the lens, and constriction of the pupil." P. 133.

Primary iritis, as from syphilis or mercury, is distinguished from the *secondary*, or that by extension from the conjunctiva, by sparing vascularity of the latter, and consequently more distinctly conspicuous vascular zone. The attack is more sudden, the pain in the region of the orbit and head commences with the inflammation, and is more severe—the vision is more quickly and completely bedimmed —the effusion of lymph is *en masse*, and the disfiguration of the pupil greater. The terminations of iritis, if unsubdued, are constricted or closed pupil, with opaque capsule —coadhesion of the iris and cornea, partial or entire—organic amaurosis, followed by disfiguration of the globe, and often by protrusions of the choroid and sclerotica.

Primary iritis, our excellent author remarks, is rarely seen unaccompanied or unpreceded by syphilitic, pseudo-syphilitic, or what are called mercurial symptoms; yet Mr. Travers has seen it exist independently of these.

"But I have since had many additional opportunities of confirming the facts before advanced, that where mercury has been used in various ways before the iris was affected, and before the other symptoms appeared which were referred to its use;—where the primary affection was either altogether questionable, or at most a gonorrhœa, or a superficial sore, which healed by a simple topical application—the iritis has yielded to the steadily supported influence of mercury upon the system, in a manner the most satisfactory; and that no other remedy with which I am acquainted, was competent to this effect." 135.

Mr. Travers adds, that he is unacquainted with any fact in medical surgery which ranks with this, in point of importance, whether we consider the urgency and frequency of the occasion, or the indispensable necessity, and almost unerring efficacy, of the remedy.

The iris undergoes changes of colour, texture, and figure, by a continuance of inflammation. For these we refer to page 136 of the work.

V. *Retina.* This is rarely the seat of inflammation; and Mr. Travers thinks that it is an error to consider intolerance of light as a sign of this affection. In the strumous ophthalmia intolerantia lucis is in excess, yet the retina is uninjured. The effect also (Mr. Travers avers) of inflammation upon a nerve of sense is to produce direct palsy, not increased excitability. The first or predominant symptom of an inflamed retina is a sudden attack of "vehement dashing pain of the most distracting kind," extending from the bottom of the eyeball to the occiput, or in the reverse direction, and the supervention, within a few hours, of total blindness, with occasional sparks and flashes of vivid light. The pupil, upon inspection, is gaping and motionless, as in confirmed amaurosis, and the humours are thick and muddy. The external signs of inflammation are in no proportion to these symptoms.

In some cases *choroid* inflammation attends, and in these the pupil is not thrown open, but is motionless. Besides diffused vascularity of the conjunctiva, the straight ciliary vessels are remarkably turgid, so as to give a livid red hue to the sclerotica around the cornea. The pupil soon becomes plugged with lymph, or the whole iris bulges forward, changes colour, and the crystalline turns opaque. The pain is attended with an alarming kind of confusion, as though the patient were about to lose his intellects. When the internal signs of inflammation are less obvious, and the humours and internal tunics undergo a slight but complete disorganization in the progress of the disease, meteoric flashes are frequent, even after the inflammation has run its course, affording delusive hopes of returning sight to the unfortunate patient. Mr. T. has seldom seen an example of this inflammation affording time for the beneficial operation of remedies.

Of amaurotic affections Mr. Travers makes two classes, organic and functional—the *first*, comprehending all alterations, however induced, in the texture or position of the retina, optic nerve, or thalamus—the *second*, including suspension or loss of function in the retina and optic apparatus, whether depending on morbid action in the vascular or sentient system of the organ. As causes of the first class we may enumerate,

"1. Læsion, extravasation of blood, inflammatory deposition upon either of its surfaces, and loss of transparency of the retina.

"2. Morbid growths within the eyeball, dropsy, atrophy, and all such disorganizations as directly oppress or derange the texture of the retina.

"3. The state of apoplexy, hydrocephalus, tumours or abscesses

in the brain, in or upon the optic nerve, or its sheath, and thickening extenuation, absorption, or ossification of the latter.

"As causes of the second,

"1. Temporary determination; vascular congestion, or vacuity, as from visceral and cerebral irritation; suppressed or deranged, or excessive secretions, as of the liver, kidneys, uterus, mammæ, and testes; various forms of injury and disease; and sudden translations of remote morbid actions.

"Paralysis idiopathica, suspension or exhaustion of sensorial power from various constitutional and local causes; from undue excitement or exertion of the visual faculty; and from the deleterious action of poisons on the nervous system, as lead, mercury, &c." 141.

From the above we may easily see that organic, and many forms of even functional amaurosis, are incurable; whilst it must be recollected that the functional cases, by continuance, lapse into organic disease. "Even under the continued suspension of function, much more the duration of a state of excitement, the power of the retina, as of other parts, gradually fades, and is at length exhausted."

Here our author makes many ingenious and highly interesting observations on both classes of amaurosis, as they are caused or influenced by different habits, professions, &c. and also on the different degrees of fortitude with which the dreadful loss of light is borne. For these particulars, we refer to page 144 *et seq.* of the work itself.

When the seat of *organic* amaurosis is in the eyeball itself, there are generally some or all of the following phenomena, viz. preternaturally, or at least, fully dilated pupil, feeble in its contractions on the sudden application of light, or absolutely motionless; an appearance common to both classes, though not invariable in either—congestion of the superficial vessels, especially of the long fasciculi of conjunctival veins—peculiar bluish gray tint of the sclerotic coat—sometimes a bulging out of one or more sides of the globe, or loss of sphericity, the sides appearing flattened—a diffused turbidity or milkiness apparently of the vitreous humour, resembling the humours in the eye of the horse, and termed glaucoma by the ancients, often mistaken for incipient cataract. "It appears deep-seated, diffused, and of uniform density; and in examining some such cases at long intervals, I have not found the appearance vary." The lens remains transparent. Mr. Travers acknowledges, however, that there are cases of deep-seated opacity so closely resembling that of incipient cataract, that it becomes next to impossible to decide on the actual state of the lens. A more common phenomenon in amaurosis is a white or greenish yellow spot, apparently in the fundus of the eye,

and a little to one side of the visual axis, sometimes having a splendid disc resembling the tapetum of the sheep, or the coloured choroid of fish; but more usually occupying a circumscribed annular space, and is seen only in a strong light, and in a particular direction. The causes of this point are involved in obscurity. However, it is by no means a constant appearance in amaurosis, nor is it incompatible with useful vision.

"In the amaurosis from inflammation of the choroid or retina, where the diseased action has entirely subsided, the veins of the conjunctiva are varicose, the iris is discoloured, thick, tough, inelastic, and preternaturally vascular; the substance of the crystalline is more or less absorbed, or converted into a fluid, and discoloured; the vitreous humour is opaque and of a deep yellow colour. The retina, like the other transparent textures, becomes opaque under inflammation, and it is probable that under these circumstances, adhesive matter is effused upon the interior of the choroid; this supposition I have never had an opportunity of verifying by dissection, in cases of which the history was known." 150.

Our author here relates two curious cases; one of absorption of the vitreous humour and collapse of the retina; the other of amaurosis, from cerebral tumour. Many cases of amaurosis from concussion have fallen under the inspection of Mr. Travers; and also of congenital organic amaurosis, for which we must refer to page 152 *et seq.*

At page 155 Mr. Travers takes up the subject of functional amaurosis, which he divides into three species, viz. 1mo. the *symptomatic*, or that which is merely a symptom of of some general disease, or disordered state of the system. as of general plethora, general debility, &c. 2ndo. The *metastatic*, produced by sudden transference of morbid action from another organ of the body, as from the skin, testicle, &c. 3tio. The *proper*, depending on a peculiar condition of the retina, as visus nebulosus, muscæ volitantes, &c.

Symptomatic Species. This, like nervous deafness, sometimes follows typhus, scarlet fever, infantile fever, and other acute constitutional diseases. It is sometimes a consequence of chronic wasting diseases, in which organic changes interrupt the nutrition of the system. Mr. Travers has seen a rapid and severe salivation, instituted for a remote affection, produce gutta serena of both eyes. The state of the circulation has a marked influence upon imperfect amaurosis, as well as upon nervous deafness. Mr. T. knows patients whose vision is benefited in a high degree, and others in whom it is as much deteriorated by the quickened circulation of a full meal and a few glasses of wine. The former.

as may naturally be supposed, are spare and meagre; the latter plethoric. Of the mental emotions, grief appears to be most influential in producing symptomatic amaurosis. This affection is often seen in young widows. The amaurosis lactantium, in which the infant preys upon its mother, exhibits a familiar example of the disease from constitutional debility.

"Amaurosis depending on vascular congestion is marked by some or all of the following symptoms, viz. dilated and sluggish or immoveable pupil, ptosis, or strabismus, and oblique or double vision of the affected eye; a preternatural action of the carotids, flushed face, sense of weight, pain, or stricture of the scalp, lethargy, occasional tinnitus aurium, with greatly disordered and irritable stomach. The patient frequently complains, particularly in straining, stooping, or on first lying down, of seeing luminous sparks or flashes, and a reflection of one or more of the choroidal vessels, the visible pulsation of which is a cause of much distress to him. A person thus affected accurately described to me the zona minor iridis, as distinctly presented to his view." 158.

Undue determination of blood to the head often exists independent of general plethora, "and is aggravated by loss of blood," of which Mr. Travers relates an example in the person of a young medical gentleman, who came to him from the country in extreme anxiety, and solicited him to apply a ligature to the carotid artery. This gentleman was of short stature, and constitutionally healthy. His pupils were large, his countenance suffused, and bearing the appearance of preternatural determination of blood to the head. He had had two inflammatory attacks in the April and October of the same year; during which, he had lost upwards of an hundred ounces of blood. He had now a constant heavy pain in the head, chiefly over the coronal suture, and in the direction of the sinuses, with tinnitus of the left ear.

"After stooping, the giddiness was extreme, and a golden-coloured spot, edged with black, appeared floating before the eye. He had been troubled with muscæ in excess, for a year and a half past; he had now fire sparks flashing before the sight, and saw a pulse in the choroid synchronous with that of the wrist. When looking at near objects he was not troubled with muscæ, but they were always numerous, in proportion as the object was remote. He did not complain of much dimness. His complaints were not relieved by topical blood-letting. He recovered gradually, but perfectly, under a regulated diet, and a course of the blue pill with saline aperients." P. 160.

The amaurosis from depletion is sometimes mistaken for that from plethoric congestion, owing to the coincidence of

a dilated and immoveable pupil, muscæ, and a deep-seated pain in the head, with occasional vertigo, together with its occurrence often in corpulent habits. It supervenes somewhat abruptly on uterine floodings, and large and sudden depletion for acute diseases. The pain is not confined to the region of the orbit, but is that peculiar nervous pain to which women are subject after uterine hæmorrhage, attended with a sense of defined pressure, "as of an iron finger on the brain," and sometimes a distressing jarring noise, like that of a mill or threshing-floor. "By a cautious use of tonics it is relieved—by whatever lowers or stimulates, whether diet or medicine, it is decidedly aggravated." The vision, in this form of amaurosis, our author observes, is further enfeebled by the loss of as much blood as flows from two or three leech-bites. This, he avers, is not imaginary. He has seen distinctly marked cases of it, "in which large and copious venesection was still urged as the only resource of art." This he considers to be a fatal mistake. We have seen several cases where local congestions of blood in the head, lungs, and other organs, appeared to depend on some peculiar state of the system, which caused the blood to concentrate in these parts, while some other parts were deficient of the proper quantity. Here neither general nor local depletion did good. But we have seen decided advantage from revulsive measures, quietude, and regulated regimen. For amaurosis sympathetic of irritable conjunctiva, we must refer to page 161 of the volume itself.

Metastatic Species. Mr. Travers has seen this species of amaurosis from the state threatening effusion into the chest—from gout in the foot—swelled testicle; in all which cases the oppressed organ was as suddenly relieved as the eye was affected. "Thus a person goes to bed with good vision, and rises blind." Here our author relates cases in illustration.

The gout attacks the eye through the medium of the stomach; vomiting occurring, with gastric pain, on the subsidence of inflammation in the extremities, succeeded by violent headach, with sudden and permanent loss of sight. To this class also belong the cases of amaurosis consequent upon the sudden suspension of the catamenia, or habitual hæmorrhoidal discharges—the rapid healing of large ulcers—the sudden retrocession of cutaneous eruptions.

Amaurosis proper. The following case will best explain a temporary palsy of the retina from over excitement. It is given in the words of a young gentleman ardently engaged in the study of the profession when thus interrupted.

"'Having habituated myself for the preceding twelve months to intense study, reading and writing to a very late hour, which had been only interrupted for a few days by a slight inflammation of my right eye, I quitted London to recruit my health in the pure air of ———. This daily improved, but I found a growing imperfection in the vision of my left eye, which advanced unaccompanied by inflammation, pain, or any other external symptom of disease. It seemed at first a film before the sight, but at length amounted to a total loss of vision. On examination, I found the pupil greatly dilated, and learned that the iris had little or no action. By the advice of Mr. T. whom I now consulted, I applied a blister, extending from the centre of the forehead round the eye to the root of the nose. This drew well, and I continued it open for ten days, closing the eye from light during that period. I took at the same time a calomel and opium pill thrice a day. In the space of a few days my mouth became sore; the pupil acted, though unequally, and I experienced a gradual recovery of vision. In the course of six weeks I was enabled to resume my studies, and could perceive no defect of vision. I had gradually reduced the dose of calomel, and now discontinued it, drinking the decoction of sarsaparilla. At the distance of four months from this occurrence, the pupil is regular and active, and the sight unimpaired.'" 165.

Symptoms of Amaurosis. Pain in the head and temples is a precursory symptom of amaurosis, diminishing as the dimness increases, and usually ceasing altogether when the amaurosis is complete. If, however, the pain be severe, remitting imperfectly, and increased by exercise, whether diffused or circumscribed in extent, it is usually connected with an *organic* cerebral change. In *this* case, derangement and torpor of the primæ viæ, loss of strength and flesh, disposition to stupor, occasional confusion of intellect, inaptitude to exertion, and paralysis of one or more muscles, will be concomitant symptoms.

"There is an intermittent spasmodic pain accompanying some cases of amaurosis, shooting through the orbit into the head, of the most acute and distressing severity; it makes a periodic attack at or about the same hour, every night, or every second night, and continues for several hours; it is accompanied with convulsive quivering of the muscles of the eye and eyelids, and profuse lacrymation; there is nothing in the appearance of the organ to explain its nature and origin." 168.

Mr. Travers believes it to be a *tic douloureux* affecting one or more of the orbitar branches of the fifth pair of nerves. He has cured two cases by arsenic, where opium failed to prevent the paroxysm. Paralysis of different muscles, as the levator palpebrarum, orbicularis, &c.—vertigo—ptosis—loss of association and direction—and strabismus, are all

more or less symptomatic of amaurosis, and on each of these our author makes acute and interesting observations. The same may be said of Mr. Travers's remarks on hemiopsia—distorted position of objects, and muscæ fixed or floating. When these last are fixed, they usually belong to organic amaurosis—when floating, to functional sympathetic or proper amaurosis. In the fixed musca, the opaque spot varies in density, in different individuals, "and under a long but gentle mercurial course, I have known it become considerably less dense, so as not to intercept bright light."

The musca volitans is sometimes solitary; but more frequently an immense assemblage, descending in a cloud as the eye is raised, and ascending as it is depressed. The patient's attention being minutely directed to these spectra, they are curiously and minutely described.

"Almost every person has, at some time or other, seen these appearances, but especially those subject to dyspepsia, and disordered function of the stomach and liver. At the moment of approaching deliquium, they appear in one vast cloud, and they are harbingers of the intense bilious headach. At the instant of their appearance, the sentient extremities upon the fingers and tongue are so benumbed, that objects of touch and taste convey a very indistinct impression, as if some muffle were interposed. These sensations I am describing *ad vivum*, for I was formerly often the subject of this attack, which was followed by a certain degree of confusion of intellect, and temporary suspension of memory, so as greatly to embarrass, if not to take away the power of intelligible expression. I mention these opposite and transitory states of emptiness and plethora concomitant with the floating muscæ, to show the purely functional origin of the affection. The one (deliquium) is an uninjected, the other (sick headach) an over-injected or congested state of the nervous texture; or suspension from vacuity, and suspension from plethora. An analogy is plainly to be perceived between the corresponding states of the sentient and visual extremities, described in the last affection, to that of a temporary incomplete paralysis." 177.

Coloured spectra, or luminous impressions of objects remaining upon the retina, are usually preceded by the fixed muscæ, and may then be regarded as a more advanced stage of the complaint, though sometimes Mr. T. has known them to be symptoms of functional derangement, and to disappear as the vision recovered. For a very curious and interesting case in illustration, we refer to pages 179-80-81, of the work.

A very frequent and characteristic symptom of functional amaurosis, our author observes, is a thin mist, fog, smoke, or gauze, which takes off the *acies oculorum acer*. Thus the letters of a book run together, and the outline of all

minute objects is indistinct. This affection is unaccompanied with irritable conjunctiva, or tendency to effusion. It is seldom relieved by glasses—never permanently. The iris appears irritable and unsteady, often contracting quickly, but vascillating between contraction and dilatation, without a change of the light.

Another functional affection is an oscillation or wavering of objects, occasioning a dazzling and confused perception —sometimes resulting from simple congestion, but occurring sometimes in Mr. Travers's experience, without any sign of this state, and in persons of an opposite frame and temperament. In functional amaurosis there is sometimes a loss of the adjusting power, and consequently of distinct vision at different distances. That gradual abridgement of the focal range, occurring in advanced life, and requiring convex glasses, Mr. Travers refers rather to a loss of power in the retina than to a permanent change in the figure of the globe, on which it is usually supposed to depend. The same taking place more abruptly in early or middle life, Mr. T. considers a symptom of amaurosis.

"Ordinary observation proves that the effect of wear and tear is to allow of good distant vision, in which the parallelism of the rays of light supersedes the necessity of adjustment, while the near sight which requires the active or tonic state of the adjusting faculty, is impaired or lost. But if, as sometimes happens, the vision of near objects remains good while the distant is obscured, the evidence of the faultiness of the retina is direct. The correction of a defective adjustment by the use of glasses, in either case, proves no more than that the retina is not organically affected, while the failure of this corrective, which is frequent in the cases referred to, demonstrates the functional debility of the retina. In most of these cases the use of glasses is of temporary benefit, but if continued, it is followed by uneasiness or pain in the eyeball." 184.

Many other phenomena of impaired vision are alluded to at pages 184 and 185 of the work, to which we refer. Many curious and important observations follow on the influence of light on amaurosis, according to the state of the retina, and pupil, &c. Some people affected with imperfect amaurosis see clearest on first waking in the morning, others the reverse. In such cases the state of the stomach has an obvious influence. Emptiness will produce muscæ and a temporary blindness. In many amaurotic patients vision is clearest in the evening, appearing to have gained strength by exercise. These differences, Mr. Travers observes, are mostly referrible to the various susceptibility of the retina determining the requisite degree of illumination of objects for vision, and the adaptation of the pupil to that purpose. The

cases of day and night blindness present the opposite extremes of variation in susceptibility of the retina, and these must be regarded as cases of proper functional amaurosis. The remarkable efficacy of blisters upon the temples in these cases confirms this fact. Our intelligent author has had abundant opportunities of ascertaining the influence of trades in producing or aggravating amaurotic affections. Tailors and shoemakers commonly remark that they never see so well as upon a Monday morning, which they justly attribute to the repose of the organ during the preceding day.

The action of the iris, in its pupillary movements, is, generally speaking, the surest indication of health in the retina. The mean state of the pupil is that of dilatation, where an amaurotic affection exists. When the perception of light fails altogether, the pupil is generally fully dilated and quite motionless.—In other cases it is not perfectly circular.

"The activity of the iris requires the free and uncompressed state of the retina, iris, and ciliary nerves. In the various forms of amaurosis, its activity is proportioned to the degree of integrity which these several parts retain, and the intensity of the stimulus. If the retina be opaque, compressed, or unsupported, the iris mechanically disordered, or the ciliary nerves palsied, the pupil is inactive, independently of the state of vision. In the first of these cases, it is evident the vision will be lost; but we continually see useful vision combined with the second and third, as after operations in which the iris has been half destroyed, or has become permanently adherent, or in malformations where it is half wanting; and in paralysis of the ciliary nerves accompanying the state of ptosis. But how shall we explain the activity of the iris in a state of absolute blindness? a case by no means uncommon. We can only explain it by concluding the organ to be sound, and the cause of the amaurosis remote, or at least external to it. Its motions in such a case are purely involuntary; the mental perception being suspended or annihilated. All that is required to excite them is the impingement of the ordinary stimulus upon the unchanged retina, the white sheet upon which the images of objects are impressed, the instrument, not the organ of perception. The iris, in such a case, acts by sympathy independent of the brain." 188.

Thus, in two young ladies the iris was even vivacious, though blindness was complete, as was the case where a circumscribed tumour compressed the left optic nerve, immediately behind the ganglion opticum, producing total blindness. In cases of perfect amaurosis, where the pupil retains its ordinary size, but is motionless, (a circumstance by no means rare.) Mr. Travers thinks that the retina has most probably undergone a change of texture. The

ciliary nerves are uncompressed, as may be inferred from the undilated state of the pupil, but the source of their excitement, sympathy with the retina, is destroyed.

In concluding the subject of amaurosis, our author introduced a curious fragment from Milton, namely, his letter to Thevenot, a celebrated French oculist, describing the symptoms and progress of amaurosis in his own case, from functional debility to the confirmed, perhaps organic gutta serena. As the letter is not long, we shall give it a place here, out of respect to the memory of our immortal bard.

"Decennium, opinor, plus minus est, ex quo debilitari atque hebescere visum sensi, eodemque tempore lienem, visceraque omnia gravari, flatibusque vexari; et mane quidem, si quid pro more legere cœpissem, oculi statim penitus dolere, lectionemque refugere, post mediocrem deinde corporis exercitationem recreari: quam aspexissem lucernam, Iris quædam visa est redimere: haud ita multo post sinistrâ in parte oculi sinistri (is enim oculus aliquot annis prius altera nubilavit) caligo oborta, quæ ad latus illud sita erant, omnia eripiebat. Anteriora quoque, si dexterum forte oculum claussissem, minora visa sunt. Deficiente per hoc fere triennium sensim atque paulatim altero quoque lumine, aliquot ante mensibus quam visus omnis aboleretur, quæ immotus ipse cernerem, visa sunt omnia nunc dextrorsum, nunc sinistrorsum natare; frontem totam atque tempora inveterati quidem vapores videntur insedisse; qui somnolenta quàdam gravitate oculos, a cibo præsertim usque ad vesperam, plerumque urgent atque deprimunt; ut mihi haud raro veniat in mentem Salmydessii vatis Phinei in Argonauticis:

> ——— κάρος δέ μιν ἀμφικάλυψεν
> Πορφύρεος, γαῖαν δὲ πέριξ ἰδόντος φέρεσθαι
> Νειόθεν, ἀβληχρῷ δ' ἐπὶ κάματι κεκλιτ' ἄνευθε.*

Sed neque illud omiserim, dum adhuc visûs aliquantulum supererat, ut primum in lecto decubuissem, meque in alterutrum latus recli nassem, consuevisse copiosum lumen clausis oculis emicare; deinde, imminuto indies visu, colores perinde obscuriores cum impetu et fragore quodam intimo exilire; nunc autem, quasi extincto lucido, merus nigror, aut cineraceo distinctus, et quasi intextus solet se affundere: caligo tamen quæ perpetuo observatur, tam noctu quam interdiu, albenti semper quam nigricanti propior videtur; et volvente se oculo aliquantulum lucis quasi per rimulam admittit."

"LEONARDO PHILARÆ, ATHENIENSI:

Septemb. 28, 1654."

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* "———Vertigo vero ipsum circumdedit
"Atra, et terram opinatus est circumagi
"Ab imo, in languidum vero soporem delapsus est elinguis."
BECK'S APOLLONIUS RHODIUS. Lib. 2. v. 203.

PATHOLOGY OF THE HUMOURS.

I. *Aqueous Humour.* Hydrophthalmia, or a simple redundancy of the aqueous humour, is a sequel of chronic inflammation affecting the interior texture of the eye. The figure of the globe is preserved, but the distended sclerotic has a dark blue tinge. The cornea is extended and prominent, the pupil dilated and inactive, and vision inconsiderable, if not extinct. In some cases there is loss of figure of the globe, and staphylomatous enlargement of the cornea, which is speckled or exulcerated, frequently presenting fasciculi of red vessels on its surface—the result of an acute disorganizing inflammation. The bulged and transparent cornea gives the appearance of redundant aqueous humour; but it is only an increased capacity of the chamber—a distinction of importance, our author thinks, since the treatment of this and hydrophthalmy proceeds on opposite principles.

The aqueous humour is rendered turbid by inflammation of the choroid and iris, resuming its transparency when the inflammation ceases. It is well known that, when discharged by accident or operation, it is reproduced in ten or twelve hours. The solvent power of the aqueous humour over the exposed fragments of the crystalline lens is not, Mr. Travers thinks, superior to that of water, which is very slow. The rapid removal therefore of the fluid and flocculent cataract, when dissipated in the chamber, cannot, Mr. T. thinks, be explained on the principle of the aqueous humour possessing a solvent power superior to common water.

"The fragments of the lens have no more power of resisting absorption than an extraneous substance, and the process improperly termed solution, is essentially referrible to the operation of the absorbents. The secreting function of the chamber is evidently a powerful one, from the reproduction of the humour in the course of a single night. That the absorbent function is nearly equal to it, is proved by the facts above-mentioned, but still more strikingly, by the rapid diminution and removal of the matter effused under inflammation, when quickened by the excitement of mercury." 197.

II. *Vitreous Humour.* The absorption of this humour is evident in cases of floating cataract, and in some forms of organic amaurosis, &c. Mr. T. examined the decayed eyes of horses, and found in many of them the opaque lens sunk in the vitreous chamber, and the vitreous humour almost entirely absorbed, the eye being filled with a morbid accumulation of aqueous humour. In some cases the globe was greatly enlarged and flaccid, resembling an undistended dropsical cyst, the crystalline being opaque, of its natural

size and firm, and sometimes its capsule thickened and scabrous, bearing marks of inflammation, and, instead of the healthy vitreous humour, containing a yellow gellatinous fluid.

The tremulous iris, Mr. Travers believes to be connected with a relative disproportion in volume of the vitreous humour, whether congenital or accidental.

"Couching and the operation by absorption, if roughly performed, break down a portion of the vitreous cells, which become obliterated, hence the frequency of floating cataract and tremulous iris after these operations. The loss of a very considerable proportion of the vitreous humour may take place without permanently impairing the vision, except of minute objects, as is proved by the successful issue of some cases of extraction, in which this accident has happened." 199.

This humour assumes a deep yellow or chocolate brown colour, frequently, in organic amaurosis, with or without cataract, and especially accompanying diseases of the iris. From the rapid and uninterrupted egress, in this and other cases, there is reason to infer that the cellular contexture is broken down, since this uninterrupted egress does not take place in the healthy humour. Mr. Travers has known blood to be effused into the cells of the vitreous humour within twelve hours after the operation of extraction, in consequence of straining on the commode, which was instantly followed by a severe pain darting towards the occiput. The coagulum was visible to both patient and surgeon; the former describing it as a central circular spot, intercepting the light. It was absorbed in the course of time, the patient gradually recovering tolerable vision. In another case, not occasioned by any improper exertion, there was active and continued hæmorrhage, producing excessive distention of the globe, attended with exquisite pain. These symptoms took place on the evening of the day of operation, and on the following day the humour, loaded with an enormous coagulum of blood, protruded at the section. Our experienced author has met with other cases in which hæmorrhage into the vitreous cells occurred in consequence of a blow, followed by inflammation and swelling, with sloughing of the cornea and protrusion of the humour, in the form of a large spongy mass, attended with severe pain in the head for two or three inches round the orbit. The occasional hæmorrhage is profuse, and it is not improbable that, at one period of this disease, its aspect and character have led to the opinion of its being of a malignant nature. The eyeball ultimately sinks, with a total loss of figure.

The vitreous humour is subject to a complete change of

consistence, and a total loss of transparency, the texture of its cells, and its volume and figure remaining. It is converted from a transparent albumen into an opaque substance resembling curd. Although the opacity is visible, the appearance differs widely from that of cataract.

"While the crystalline remains transparent, the same bright-coloured appearance is seen at the bottom or sides of the eye, which is supposed to announce the incipient medullary fungus. In the progress of the disease also, as in the malignant disease, the lens appears to become opaque, and is protruded so as forcibly to dilate the pupil; this becomes fixed, its edge roughened by detached pigment, and the iris convex, so as to give a conoidal figure to the globe." 202.

Several years ago Mr. Travers extirpated an eye in a fine infant, in whom this disease was supposed to be malignant fungus in its nascent state. The child has grown up healthy, the other eye remaining sound. Upon section of the eye, the vitreous humour presented the appearance above described. The tunics were all entire. Mr. Travers has since seen several cases of a convex and permanently dilated pupil, with a deep-seated opacity of a splendid yellow tint in children; these appearances, to his surprise, continuing stationary for years, unaccompanied by any disorder of the health. He therefore regards these cases as simple and uniform conversion of the substances of the vitreous humour, by an altered action of the secreting vessels, wholly independent of a malignant character. Yet he confesses that, unhappily, we possess no accurate means of diagnosis between malignant fungus and this disease, in their incipient state; nor do we know that the disease may not, sooner or later, take on an active and malignant character, as now and then occurs in the testicle, female breast, and other textures.

"There are, however, two marks of distinction sufficiently strong between the malignant fungus and this disease of the vitreous humour; viz. the progressive or stationary condition of the disease, denoted by the state of the tunics and the eyeball generally, and secondly, the presence or absence of pain and constitutional irritation. To these I might add, especially as regards children, the affection of one or both organs, as affording a strong presumption that the disease is harmless in the first case; in the second, a conclusion that it is malignant." 205.

It is remarkable that both the disease under consideration, and the malignant fungus of the eyeball, are of most frequent occurrence in infancy. Mr. Travers has not seen the former in the adult.

Crystalline Humour. Excepting in one case, Mr. Tra-

vers has not witnessed any other result of inflammation of the crystalline lens and its capsule, than opacity. In this exception suppuration took place within the crystalline capsule, after a severe blow on the globe of the eye. Under the action of mercury the pus and lens were absorbed together, the case terminating in capsular opacity, with a constricted and misshapen pupil, and coadhesion of the iris and cornea.

The capsule of the lens will readily unite, when incised, unless a portion of the lens itself intervene. The capsule, when adhering to the iris, receives delicate red vessels, running in peduncles of lymph, produced from the inner border of the pupil. Small flaky portions of the pigment are also frequently detached on the margin of the capsule—an appearance commonly seen in the constricted pupil after chronic iritis, and often the result of reiterated attacks of inflammation, at short intervals, to which a constricted state of the pupil predisposes.

"The iris is much thickened by repeated depositions of lymph, until its texture becomes quite altered. There is a very imperfect and deranged state of vision, according to the degree and extent of opacity of the capsule, which admits of no improvement by the direction of the light; and sometimes a marked and painful determination of blood to the head. Except in this case, and in punctured wounds, the capsule is seldom partially opaque, but though its opacity is diffused, it is often not of uniform density, so that it has a dotted or mottled appearance. When calcareous matter is deposited, it is in small flakes or scales, which have a brighter tint than the opaque membranous portion. The opacity of the capsule, as of the cornea, varies in degree, from the slightest nebula to the opacity from change or conversion of texture. The incipient nebulosity is often, as before observed, difficult of discernment. Where the capsule is completely opaque, the lens undergoes a slow absorption; the capsule, however, remains transparent in most cases of senile cataract, not preceded by inflammation. The capsule, like all other textures of the body, undergoes absorption, when detached." 208.

The fluid, floculent, caseous, and hard cataract, are the principal and distinguishable degrees of density to which the opaque crystalline is subject. On these varieties Mr. Travers has written fully in the fourth and fifth volumes of the Medico-Chirurgical Transactions.

The opacity of the posterior capsule; *i. e.* the tunica hyaloidea, is very rare, which it would not be, Mr. Travers thinks, if the lens were invested in a capsula propria, especially after the operation of extraction, in which the anterior capsule only is lacerated, and the lens allowed to escape. Where it is met with, the lens and anterior capsule are usu-

ally transparent; and when this is *not* the case, and the cataract escapes with a posterior fold of opaque capsule, it is always, in our author's experience, accompanied with a considerable discharge of vitreous humour.

Cataract. The formation of cataract, though uncertain, is usually slow. A cloudy, semi-opaque state, or distinctly nucleated opacity sometimes remains stationary for years, or even for life; yet it *occasionally* forms with rapidity, without inflammation. Generally, however, the rapid formation of cataract is attended with inflammation, or preceded by diseases of the textures. The residence of a perfect cataract in the eye, is injurious—at least it is attended with the risk of destructive inflammation. The vitreous humour undergoes a partial absorption, and the lens, losing a proportional support, bulges forward, and presses upon its capsule and the iris—causing what operators call a narrow anterior chamber.

"Where the capsule yields from a blow or by absorption, and the pupil is dilated by the protruding lens, a violent inflammation, attended with very acute pain, is the invariable consequence. I have known this happen suddenly and independent of external injury, where the formation of the cataract has been gradual, and unattended with pain; and the spontaneous occurrence, though not so frequent, is precisely similar to that produced by the too free laceration of the capsule with the needle." 211.

The absorption of opaque lens is quick in proportion to the looseness of its texture, and its complete exposure, by breaking up and detaching its fragments, to the operation of the aqueous humour, particularly if there be a plentiful healthy secretion of the latter; for a turbid state of it indicates the arrest of its secretion, and *vice versa*. In confirmation of this, Mr. Travers observes that, in all cases of narrowed anterior chamber, by the partial coadhesion of the iris and cornea, consequent on injury or inflammation, the absorption is slow. Absorption does not take place, he says, at all, during the existence of inflammation, in which state the aqueous humour is in a morbid condition; and if the inflammation be deep-seated and protracted, the vitreous humour partake of it. Mr. Travers has seen a case of dislocated lens occupying the anterior chamber, followed by inflammation of the iris, from which membrane it derived an adventitious capsule organized by coloured vessels.

IV. *Diseases affecting the Eyeball.* Our author properly passes over the injuries, from external violence, to

which the eye, in common with all other parts of the body, is liable, as coming within the range of general surgery.

Suppuration of the eyeball follows sometimes (though less frequently than from injury) a long continued and exasperated inflammation of the interior tunics. The globe becomes rapidly enlarged, protruded, and tense;—the conjunctiva, highly tumid and vascular, is rolled out upon the cheek, everting the lower eyelid—the pain is very acute and lancinating through the eyeball and head—the patient's health suffers, and the symptomatic fever is considerable. Pus collects in quantity—the cornea turns opaque, and slowly ulcerates or sloughs, giving vent to more or less of the contents of the eye, when the irritation gradually subsides. The eyeball afterward shrinks up, and the cornea is obliterated. The hypopion or purulent secretion filling the anterior chamber, and originating from internal ulcer of the cornea, is not accompanied by the enlargement, acute pain, or irritating fever, marking abscess of the globe. The result, however, is the same—the perishing of the cornea.

Mr. Travers formerly supposed, what is generally believed still, that the bulb or globe of the eye was liable to be affected with cancer, but he is now of a different opinion—he believes the disease is peculiar to the lacrymal gland, conjunctiva, and eyelids. Soft cancer, however, or as it is sometimes termed, "medullary fungus,"—"fungus hæmatodes," &c. is common to each and every texture, excepting the crystalline and cornea. The early appearances of this formidable disease have been accurately described by Mr. Saunders and Mr. Wardrop. In Mr. Travers's experience it has speedily proved fatal, when arrived at that stage in which the visible enlargement of the ball, livid blue tint of the sclerotica, and distention of the conjunctival and palpebral vessels, present themselves. By these the character of the disease is decided. The staphylomatous protrusions of the sclerotic and choroid coats may be confounded with this disease, unless a careful discrimination be exercised. The complexion, as the disease proceeds, acquires the leaden paleness of cancer, and the rest is broken by deep and lancinating pain. If a child, it is heavy-headed and lethargic, as one affected by hydrocephalus—disturbed by occasional convulsive starts; the stomach often rejecting food; the frame quickly emaciating; and the highest degree of fretfulness and irritability being present. The child usually expires in convulsions. The adult suffers from spasmodic shoots of pain through the head and eyeball, with simultaneous startings on going to rest; but the constitutional disturbance is inconsiderable previous to the protrusion of

the fungus, and hæmorrhage, which usually comes on at this period, is exceeding distressing. For numerous pathological details we refer to pages 219-20-21-22.

Pathology of the Appendages. Abscess sometimes forms within the orbit, occasioning, anterior to its discharge, an equal protrusion of the globe, with eversion of the palpebræ, dilated pupil, and suspended vision, which is sometimes lost altogether. Adipose and steatomatous tumours also form in the fatty and cellular textures round the eye, turning and fixing it in an opposite direction, and rendering it dim by compression. Mr. Travers has removed them in several instances when projecting over the top, or on one side of the globe. When the conjunctiva is freely divided, the fatty tumour is easily hooked forward, and dissected out with a narrow bistoury; but it is not so easy to remove cysts *entire*, which contain a fluid readily escaping on the least puncture. If part of the cyst be left behind, the wound breaks out again and again.

"The encysted tumour, although it extend to the bottom of the orbit, seldom occasions the distortion of the globe. A disagreeable sense of numbness and coldness affects the integument of the glabella and forehead, after the division of the frontal and supratrochleur nerves; these therefore should be avoided in the operation. The tumour sometimes projects exterior to the tarsus, so as to rise upon the palpebra, but more commonly it is beneath the tarsus and contiguous to the globe. In the former case the cyst lies upon the periosteum of the orbit, and is adherent to it; in the latter it is adherent to the globe." 226.

A case occurred in the London Eye Infirmary, where a cyst, containing hydatids deeply seated in the cavity, protruded the eyeball. "The hydatids were evacuated by a puncture in the cyst; the eye returned into its natural situation, and the patient was completely cured." Our author has related a case of aneurism by anastomosis in the orbit, in the 2d volume of the Medico-Chirurgical Transactions; and Mr. Dalrymple a similar case in the 6th volume of the same work.

Exostoses of the orbit are not common. Our author has never seen them in the living subject of a size to create deformity or material inconvenience. Not so polypi, which in their progress burst through the ethmoid and lacrymal bones, sometimes extruding the eyes, so as to occasion the most horrible deformity. For diseases of the lacrymal gland, see pages 228-9.

Facial Appendages. On those little abscesses, denomi-

nated "stye," and on warts and vesicles, Mr. Travers makes remarks, and then introduces the subjects of lippitudo, diseased cilia, tinea ciliaris, and trichiasis, for which we must refer to the volume itself. With the following extract respecting ectropion, we shall conclude our analysis of the pathological division of Mr. Travers's work, of which we hope we have presented a fair outline. In our next number we shall analyse the therapeutical and operative portions of a volume which does honour, not only to the author, but to the country to which he belongs.

"The ectropion is the result of injury to the eyelid, as wound, burn, herpetic ulcer, or the sequela of chronic lippitudo. The tarsus of the lower palpebra sometimes falls outward from an apparent loss of elasticity, or the unequal action of the orbicularis muscle. The lid receding from the globe suffers the tears to collect in a pool between them. An unhealthy state of the conjunctiva is, if not the cause, as when villous and redundant, a certain consequence of its eversion and exposure. The case is much aggravated when coadhesion, after burns or neglected wounds, ulceration from any cause, or long enduring eversion, takes place between the skin of the eyelid and cheek. This case admits of palliation, but not of cure. I have much improved several cases by first detaching the fastened lid and forcing it to heal by granulation, and afterward, removing a triangular portion of the cartilage, according to the proposal of a modern author, for the correction of the eversion, which is the best remedy for such eversions as do not depend upon the protruded conjunctiva.* In this, which is the simplest case of ectropeon, the excision of the diseased conjunctiva is sufficient. Where the everted lid is adherent to the bone, there is a deficiency of cellular substance to produce granulations, and the case is, generally speaking, slightly if at all benefited by operation." 235.

IX.

General Elements of Pathology. By Whitlock Nicholl, M.D. M.R.I. A.F.I. of the Royal College of Physicians, London; Member of the Medical and Chirurgical Society; Corresponding Member of the Association of King's and Queen's College of Physicians, Dublin. Octavo, pp. 233. Callow, London, 1820.

Dr. Parry has justly observed in the preface to his Elements of Pathology and Therapeutics, "As the great and

* "This remedy results from considering the relative condition of the tarsus and skin at the base of the eyelid, in the two diseases, entropeon and ectropeon. In the first the integument is elongated, in the second the tarsus. As

ultimate end of pathology is its application to practice, it is by this criterion alone that the value of any pathological system ought to be estimated." The study of pathology has certainly gained more general attention from the junior branches of the profession, since the publication of Dr. Parry's Elements, and not before it was most seriously called for. Will it be credited, that only eight years ago, the views which are now generally entertained, and which dissection, in a great measure has proved, of the relations existing between the vascular and nervous systems in health and disease, should have been ridiculed and laughed at? That in so short a period of time so great a revolution should have been effected in our pathological views, as to bring the majority of the *thinking* part of the profession to the same conclusions in regard to practice, is truly astonishing.—And in stating this, we have only to refer to the writings of the ancients, and attend to the relations of dissections handed down to us, and wonder why, for so long a period, incorrect opinions should have been entertained. When perusing the works of Morgagni, we cannot but be surprised that the appearances upon dissection which are so faithfully and minutely detailed, should not have called forth some new light in the treatment of diseases, more particularly in those of a spasmodic nature. The bounden duty of every medical man is to think for himself, and to endeavour by indefatigable perseverance, in scrutinizing the wonderful mechanism of our frames, to arrive at just conclusions of what constitutes the difference between health and disease. Palmam qui meriut ferat. It is to Dr. James Sanders, we believe, that we are particularly indebted for many of the pathological opinions at present entertained. Dr. S. did not allow the observations of the ancients to pass unnoticed, nor would he receive bare assertions for facts. During life, every symptom of disease was noted down, and after death, every part of the human body was carefully examined:—for instance, in convulsive diseases the muscles spasmodically affected were noted down; and after death, they, together with their nerves and blood-vessels, were carefully dissected, and compared with others in a sound state. These observations were more particularly made upon the human subject, both by himself and pupils. Dr. Moulson had an

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in the first case by removing a portion of the redundant skin we turn out the inverted tarsus, so in the latter by removing a portion of the elongated tarsus, we turn in the everted. It will be understood that it is only relatively that we speak of the elongation of the tarsus. It is everted. and «trictured in the state of eversion by the «kin "

opportunity of putting his views to the test, in five rabid dogs, independently of the numerous experiments he made upon horses and dogs in a healthy state. Dr. M. asserts that his practice and experiments are completely in unison. The observations on spasmodic and convulsive diseases by Dr. Moulson, which appeared in the third volume of the Monthly Series of this Journal, were the first which attracted particular notice, and novel as they then were supposed to be, was sufficiently proved by a contemporary editor demurring inserting them in his journal, because they were likely to induce a discussion: how far that may be we cannot say, but being well known to be Dr. Sander's opinions, they were not liked.

Too much praise cannot be bestowed upon those individuals, who with their best endeavours, strive to add their mite to our circulating knowledge. It gives us pleasure to see men of talent, such as Dr. Nicholl, advancing just views of the human economy, and thereby establishing correct therapeutical knowledge. The plain and unostentatious manner in which these elements are ushered before the public, clearly realizes the motto affixed to the title page:— "Hoc opusculum ut in publicum ederem, non fecit profecto inanis, ac popularis auræ captandæ cupiditas, sed eo adductus sum, ut multis meorum æqualium hinc inde errantibus viam monstrarem, et aliquantulum munirem." This book is divided into sections, the first of which contains an outline of the human economy. "The organized body" is described "as consisting of a system of supply and waste; of a nervous system; of various assemblages of contractile fibres, which are called muscles; and of a fundamental structure, which consists of bones, of cartilages, and of the varieties of membrane." The system of supply and waste, consists of the vascular system, and of its two appendages, namely, the alimentary canal, and the pulmonary air-cavities. The various functions of the vascular and nervous systems, together with the respiratory and digestive organs, are here cursorily treated of, but under each distinct head, each division of the subject is regularly analyzed. These elements are written much after the manner of Dr. Parry's, but are not so fully treated of, as proofs and illustrations of what is advanced are not brought forward as in Dr. P.'s work. These are very necessary to the student, in order to command his attention, and give to him a taste of examining for himself. Simple ipse dixits do not pass so currently as in former times, and therefore it is necessary to bring conviction to the mind before any assertion can be received as true. In saying this, we by no means call in question the

truth of Dr. Nicholl's views of the subject he treats of, for great praise is due to him for bringing together in so concise a form, a view of the functions of the human body.

According to Dr. N. no one part of the body is independent of another, and that it is by an equilibrium being sustained between the various functions of the human body that health is constituted. "For the functions of the vascular system would cease, if those of the nervous and muscular systems were suspended. The functions of the nervous systems would cease, if the offices of the vascular system were suspended. And the muscular system would be inert, were it not for the influence which it derives from the vascular and nervous systems." P. 14. In other words, in the chapter of general inferences, "there is a certain state of the several parts of the economy; a certain state of the several functions of each part; a certain mutual relation, and balance, and exchange of influence, between all these several parts and functions; which constitute that condition of living man to which the term *health* is applied." "The term disease embraces every state of the economy, which is different from that condition which is termed health."

The pathological views contained in this work are what are generally entertained by the profession at large. The manner in which they are drawn up alone differs—thus in describing congestion of the arteries of the brain: "should the tonicity of the cerebral arteries be so far lessened, that those vessels become over-distended with blood: or if, in consequence of the receipt of an increased quantity of blood by those vessels, an increased flow should take place from the cerebral exhalants; in either of these cases, inordinate compression of the cerebral substance may arise." P. 29. Arterial turgescence is but very rarely to be met with upon dissection; we in general only find the veins of the brain turgid. If an aneurism of the internal carotid arteries on the side of the sella turcica be alluded to, it is an exceedingly rare occurrence: the internal carotid arteries are very apt, in persons of an advanced age, to become ossified, and the same morbid change may be traced along their branches —in such cases, the deposit of ossific matter in the arteries would be a sufficient proviso against those vessels becoming over-distended with blood.

Dr. Nicholl seems to agree in opinion with those who believe that the generation of heat in the human body is dependent upon the combined action of the nervous and vascular systems. That it is so, there can be no doubt; yet, at the same time, we must not lose sight of the circulation on the brain and nerves. Two or three hemiplegic cases

have occurred in our practice since Mr. Earl's cases and observations were published in the seventh volume of the Medico-Chirurgical Transactions, wherein the temperature of the paralyzed side considerably exceeded that of the unaffected side: the reverse generally being the case. How such was to be accounted for, it would be worse than useless to theorize about, as dissection, if any thing, could alone have afforded any clue to it.

"In many cases," Dr. N. says, "the act of retching is called forth by what I have termed revived sensation, as when the mention, or the sight of a substance, which has formely excited vomiting, causes the act of retching to be reproduced, although there be no impression repeated on the stomach. Whatever produces great disgust, as the mention, or the sight, of a disagreeable substance which may never have been admitted into the stomach, may bring on retching." P. 109.

An illustration or two of the above would add a zest to the study of the subject, and engage more the attention of the junior members of the profession than the bare citation of the circumstance. We can mention one, out of many instances, where a medical friend, for some months after recovery from a fever, was thrown into a violent fit of retching at the mention of the word antimony: had he been in the midst of his dinner, or enjoying himself with his friends, an allusion to antimony would instantly induce retching. The manner in which muscular contraction is produced is thus stated:—

"The contraction of a muscle is produced by the transmission of nervous power to its fibres from cerebral substance, as from cranial, or spinal brain; this transmission is accomplished through the medium of nerves, along which we conceive the nervous power to be conveyed, in a direction from their cerebral to their anti-cerebral extremities. Whatever, then, causes the transmission of this power to muscles, will produce contractions of their fibres; and by whatever nerve this power is conveyed, contraction will take place in all those muscular fibres among which the anti-cerebral terminations of that nerve are distributed." P. 124.

We perfectly coincide with Dr. N. in his general pathological views; yet we cannot but repeat our regret at his not having advanced proofs and illustrations so as to have enlivened the subject. The dependence existing between the vascular and nervous systems may be proved in a variety of ways; and also, of muscular contraction being dependent upon the combined action of the vascular and nervous systems. Examples are continually occurring in the surgical department, in proof of what is advanced:—in the operation of popliteal aneurism, both the temperature and muscular

action of the limbs are considerably altered by the division of the artery: the same follows the division of a nerve in any part of the body. That the nerves are dependent upon the vascular system for transmitting, what is termed, nervous power, may be proved by bleeding animals to death, as related by Drs. Moulson and Seeds.

Respecting the voluntary and involuntary muscles, the following opinion is entertained by some individuals:—that they are supplied by the same nerves, and that it is only by the stimulus applied to the involuntary muscles that keeps them in continual action. For instance, the heart is stimulated by the blood; withdraw that, and the heart ceases to act. The bowels act from the stimulus of their contents; the liver, &c. in the same way. The arteries in the arm and fore-arm running between muscles, are supplied by the same nerves as the muscles themselves. When the voluntary muscles are put into action, a greater quantity of blood is immediately directed to the nerves; and with the friction of the muscles, they give an increased influence to the muscles, so as to effect any object desired, in which force is required. The ganglia are not considered as so many small brains, but only binding the nerves in such a manner, that when an increased action is required, they act in the same manner as other nerves do when compressed by muscles:—for instance, when the intestines become filled with food, the nerves stretched upon them are drawn forwards, and these nerves, proceeding from ganglia, have their power increased in proportion as they are extended by the intestines, and bound down by ganglia. By disease, voluntary muscles become involuntary. In paralysis, apply galvanism to a leg or an arm, and immediately it acts. Subtract the stimulus of the blood from the arteries, and they become ligaments. So far it is considered as a proof, that involuntary actions in the different parts of the body are continued by the application of a stimulus, and that ganglia do not serve the office of minor brains, nor are there two sets of nerves in the human body, the one supplying the voluntary, and the other the involuntary muscles. How far the above conclusions may be correct, we do not take upon ourselves to determine; but shall leave so intricate a subject for those who may have more time than we have to theorize upon it.

In consequence of the intimate relation and connexion which subsist between all parts of the economy, Dr. N. considers it impossible to portray the various forms under which disease may appear, or to form any correct nosological system.

"There are two ways in which the bodily structure of man may be described. We may speak of it as being composed of distinct sets of structures, as of those which are comprised under the terms vascular system, and its appendages, nervous system, muscular system, and basal structure, which latter term comprehends the bones, the ligaments, and the varieties of membrane; or we may treat of it after the manner of geographers, as consisting of the head, of the neck, of the thorax, of the abdomen, and of the upper and lower extremities; subdividing each of these parts, and enumerating the several contents of each. An equal degree of mischief may result from each of these modes of considering our structure. For whichever mode we adopt, we acquire a habit of considering each portion which we enumerate as a distinct and insulated part. The consequence is, that when any deviation from the healthy state occurs in any one of the subdivisions which we have made, our attention is fixed upon the diseased condition of this particular portion of the body, while every other portion is supposed to preserve its former healthy state.

"Thus, those who have adopted the first mode of considering our bodily structure speak of diseases of the nervous system, diseases of the vascular system, and diseases of the muscular system. In so doing, they are incorrect, inasmuch as a disordered state of either of these systems implies also a diseased condition of each of the other systems.

"Those, on the other hand, who adopt the latter mode of regarding our bodily fabric, speak of diseases of the head, of the chest, of the abdomen, of the skin, &c. They subdivide these into diseases of the cranium, of the cranial brain, of the lungs, of the heart, of the liver, of the stomach. of the bowels, of the spleen, of the pancreas, and so on. These persons act incorrectly also; because, inasmuch as, in each part which they enumerate, there are portions of the general nervous system, and of the general vascular system, it is evident that each part cannot be considered as a distinct insulated republic, but as a constituent portion of the general commonwealth, whose health is dependent upon a certain condition of every portion of the body." P. 143-4.

Were it possible to construct a correct nomenclature of diseased states of the human body, it would be truly desirable; but in our present state of knowledge, that is impossible. If the symptoms of disease were universally attended to, and not the name, more correct and fortunate practice would result therefrom.

Dr. N. perfectly coincides in opinion with those who will not allow dropsy to be a disease, but merely a consequence of various deviations from the healthy state. Indeed, ascites or anasarca, succeeding scarlatina, require very little medicinal treatment, provided the lancet has been used in the onset.

He strenuously admonishes the practitioner to guard

against being governed in his practice by any nosological system, but seriously to attend to the symptoms as they present themselves, and to the junior members of the profession, in particular, we would recommend the following for their perusal.

"We must attend to every symptom, carefully investigating the causes of each, and from a general review of all the symptoms, and of all their several causes, we must endeavour to detect the primary source of the general disturbance, of which the symptoms are merely the sensible effects. The symptoms will be our guides in this research; and, as soon as we have discovered the object of our investigation, those guides should be dismissed from our notice. For in vain shall we combat effects, if the cause remain unsubdued." 153.

Annexed to these elements of pathology are three appendices; the first is an analysis of the phenomena of fever; the second are remarks on inflammation; and the third are aphorisms respecting absorption.

So much of late has been written both upon fever and inflammation, that we must refer our readers to Dr. Nicholl's work that they may duly appreciate it. After reviewing the several causes from which the symptoms of fever may arise, Dr. N. thus sums up:—

"It appears, then, that the several states which give rise to the several symptoms which accompany the progress of fever, may be arranged thus:—

In the Early Stage.	*At the Height.*	*In the Decline.*
"Diminished sensibility of the nervous system.	Increased sensibility of the nervous system.	Diminished sensibility of the nervous system.
Diminished action of the heart.	Increased action of the heart.	Enfeebled action of the heart.
Contracted state of the small arteries.	Increased flow of blood through the smaller arteries; the opposition which is made by the exertion of the contractile power of these vessels, being overcome by the increased action of the heart.	Relaxed state of the small arteries."

P. 177.

"The commencement and progress of fever are not always characterized by the train of states which have been laid down in the foregoing analysis. In some instances the symptoms which usher in fever, are such as denote the existence of increased sensibility of the nervous system, which may arise from an erethismal, or an inflamed, condition of the cerebral structures. The second stage of fever will, in these cases, be constituted by states similar to those which ushered in the attack; the difference being, that

in the second stage they exist in a greater degree, and to a greater extent. The first and second stages of fever in these cases, then, differ in degree, not in essential character. The increased sensibility, in these cases, may proceed from erethism, to which inflammation may succeed, or the inflammatory state may exist from the commencement. The third stage, in these cases, may be characterized by states, similar to those which have been already pointed out as occurring in the decline of fever." 184.

The brief sketch which we have thus presented to our readers, we trust, will be a sufficient inducement for our brethren in the profession to have recourse to the work itself, in order that its merits, of which it possesses no small share, may be duly appreciated.

X.

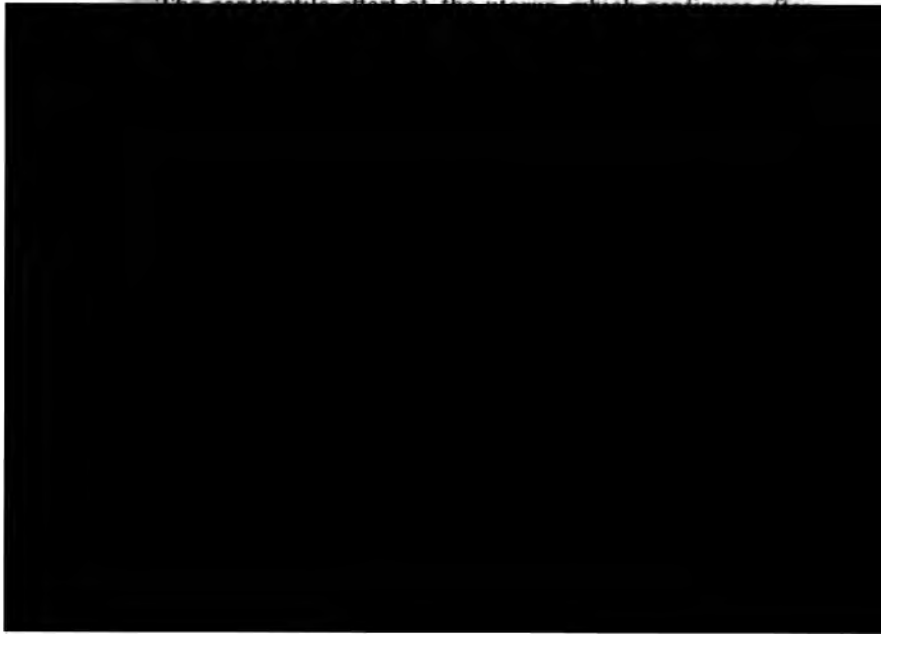
Practical Observations in Midwifery; with a Selection of Cases. Part I. By JOHN RAMSBOTHAM, M. D. Lecturer on Midwifery, at the London Hospital, and one of the Physician-Accoucheurs to the Lying-in Charity for delivering poor married Women at their own Habitations. London, 1821; 422 pages, octavo.

NONE of the charitable institutions, with which this metropolis abounds, are more deserving of praise than those established for the relief of parturient women. More than five thousand poor females pass through the "pains and perils of child-birth" annually, under the care of the midwives belonging to the Charity to which Dr. Ramsbotham is attached. This immense number of patients must render difficult and important cases of frequent occurrence, and afford the medical officers the most ample opportunities of observing every variety in the process of parturition. The obstetric art has thus been brought to such a state of maturity, that little improvement can be expected, excepting from those who are engaged in the most extensive practice of it; and we are happy to find that they, whose office it is to assist the birth of mankind, and to relieve some of the miseries, and avert some of the dangers, to which the fairer sex is exposed, are not less zealous in the cause of science than their brethren who have adorned the other branches of the profession by their exertions in our hospitals, fleets, and armies.

The author of the work before us sets out with a brief description of the gravid uterus, the parietes of which he

says are neither muscular, tendinous, cartilaginous, nor membranous; but consist of a structure *sui generis* and peculiar to that organ. He next proceeds to describe the process of parturition. He very justly observes that the more gradually and slowly the body and limbs of the child are expelled after the passage of the head, the more perfectly does the uterus contract. This was particularly noticed by Mr. White of Manchester, who advised the expulsion of the child to be retarded in quick labours, to promote and expedite the separation of the placenta.

After the birth of the child it is an excellent rule for the accoucheur to lay his hand upon the abdomen of the patient. He thus avoids the disgrace of leaving her undelivered of a second child in a twin-case; and is enabled to ascertain the degree of contraction the uterus has undergone. The expulsion of the placenta should be left as much as possible to the efforts of nature; but if these should not be sufficient within one hour, it will generally be found that the after-birth has been detained by some unusual cause, and to require a manual extraction. The occurrence of hæmorrhage might render an earlier and more hasty separation of the placenta requisite; and we know, from experience, that when it has formed a morbid adhesion to the uterine parietes, an occurrence which sometimes happens even in the hour-glass contraction, it is not essential to our ultimate success for us to harass our patient with attempts to detach all the straggling portions of it which have unavoidably been lacerated, especially when they adhere with firmness, and are of a volume too small to be grasped with the fingers.



and obedience from the mother to a hireling, who cannot appreciate their value. Who is prepared to say what may be the future result of this transfer? After a denial of its (his) natural nourishment, after bereaving the babe of its (his) only present birthright, is it surprising that instances of filial estrangement should occur; or, when once produced, that it should become permanent? May we not attribute some of those disgusting alienations, occasionally met with in certain ranks, to the neglect of this delightful office? Though human institutions admit of ranks and degrees into society, the Divine Will has ordained that all women shall be equally liable to the pains and perils of child-birth, and to its consequences. Milk therefore flows similarly into the breasts of the princess and the peasant, and frequently into those of the former in greater abundance from better fare: it must therefore be repelled or absorbed, under the risk of suppuration and febrile affections, and under the repeated exhibition of nauseous purgatives. That woman but ill consults her future health and comfort, who voluntarily declines this engaging office." P. 72.

After this digression we return to the management of the placenta. Dr. R. has observed an adhesion of it to follow external injuries, which he suspects have not been so considerable as to produce separation, yet sufficient to excite the vessels of the uterus to an undue degree of action, and to throw out coagulable lymph, by which the placental and uterine surfaces are morbidly united. One portion of the placenta sometimes is adherent, while the opposite part is advanced or protruded. In this case care must be taken that neither the mass itself nor the funis be lacerated.

In all instances of adhesion after an uncertain period hæmorrhage ensues, owing to the *partial* separation of the placenta, which prevents the uterine vessels from contracting. A fatal discharge may arise from this source a short time after the birth of the child; and, as a certain quantity of blood must unavoidably be lost by the extraction of the placenta, the sooner this operation is undertaken, perhaps the better. In complete adhesion little or no hæmorrhage is present. The placenta having been withdrawn, it is always desirable that uterine contraction should follow; for while the uterus remains flaccid, it is in danger of concealing an alarming discharge of blood, which distends its cavity, and terminates in death sometimes, before it is suspected. Here a sense of continued faintness is more dangerous than actual syncope: in the former the circulation and hæmorrhage continue; in the latter they are suspended, and coagula are formed at the mouths of the uterine vessels. During a state of absolute syncope, it is the most prudent practice to wait; and, before an attempt is made to remove the placenta, to

restore by suitable means the vital energy. The life or death of the woman will, in great measure, depend upon the judgment of the practitioner. Collateral aid may be derived from attention to external circumstances: as cold applications, the admission of cold air, and the administration of acids, together with stimuli for the schneiderian membrane and the stomach, which the attendants will take care to provide, but which ought to be used under the direction of the accoucheur. In hæmorrhage from retained placenta Dr. R. is not an advocate for large and repeated doses of opium. The patient after delivery should not be moved until the faintness has left her. We desire that our patients may remain in the same position for an hour or two: for we consider it better for them to be exposed to the danger of receiving cold from the wet clothes, than of expiring from the syncope, which is liable to follow the least exertion.

Several distressing symptoms usually follow excessive hæmorrhage. The principal of these are a pulsatory pain in the head and a palpitation in the region of the heart and epigastrium. The former subsides in a few days, and Dr. R. says, is relieved by early and active purgatives; the latter we have repeatedly removed by steel, the exhibition of which has been commenced at the end of the second or third week, while dyspnœa and a frequent feeble pulse have been attendant. In these cases, we think, it is probable that venous congestions interrupt the due distribution of the blood, and that the steel unloads the turgid viscera, either by its influence on the quality of the circulating fluids, or by invigorating the muscular structure of the heart and arteries, as in chlorosis inops.

The placenta, after it has been separated from its uterine attachment, may be retained by inactivity of the uterus, or by the hour-glass or the globular contraction. Should any considerable hæmorrhage occur in the first case, it will be requisite to proceed without delay to extract the placenta. It should also be removed in the longitudinal contraction, as soon as the nature of the disease has been discovered; and in the globular one manual assistance will be advisable, when expulsion does not take place within a reasonable time. In the hour-glass contraction we have often found the after-birth adhering to the fundus of the uterus with great firmness; but we believe with Dr. R. that, in general, it is detached from its connexion with that organ, before the morbid contraction happens.

Disruption of the placenta is commonly occasioned by imprudent force applied to the funis; and when a considerable portion of the former is left adhering to the uterus, a

corresponding degree of hæmorrhage succeeds. Uterine pain and tenderness commence and terminate in fever, delirium, irregularity of the bowels, offensiveness of the lochial discharge, and sometimes within a week or ten days the melancholy scene is closed by enlargement of the abdomen, restlessness, involuntary evacuations, and death. Sometimes, the symptoms being milder, a puriform discharge has issued daily from the vagina, and been followed by recovery. A gentle attempt should be made to remove the adherent portions of placenta; and should after-pains be troublesome, we must be careful not to interrupt their salutary operation by large doses of opium. Saline medicines and aperients will constitute the principal remedies; and when peritonæal inflammation shows itself, leeches may be safely applied to the abdomen.

It sometimes happens, after the uterus has expelled its contents, and has appeared to have duly contracted, that it suddenly relaxes, and acquires from internal hæmorrhage an increase of magnitude, attended with faintness, pallid countenance, frequent pulse, and other marks of depression, which become more and more alarming, until a more permanent contraction occurs, or the woman dies from loss of blood. Corpulent females, of lax fibre, are most liable to this misfortune; also those who have undergone tedious or difficult labours. We remember a melancholy instance of death from this cause, in the practice of a friend, who had just withdrawn into the dining-room to take a glass of wine and congratulate the husband on the safe delivery of his wife. On receiving a hasty summons he hurried up stairs, and found his patient, to his great astonishment, in the very act of expiring. Dr. R. throws out some hints respecting the probable cause which deprived the nation of an illustrious and beloved female; but as we are not disposed to wound the feelings of the innocent, we shall abstain from repeating his remarks. Indeed, any detail of suppositious occurrences, which charity ought to bury in oblivion, can neither add to the skill or advantage of the author, nor improve the confidence or good opinion of the public towards the professors of the obstetric art.

The treatment which Dr. R. lays down for relaxation and enlargement of the uterus after delivery, is judicious.

"Apply the hand externally on the uterine tumour, enclose it firmly within the grasp of the hand, and gradually make a firm compression. This practice seldom fails to reduce its size, and to bring on an increased degree of contraction. The external application of cold may be useful. Ices and cold fluids may be taken at pleasure. Little reliance can be placed on the effects of

astringent medicines, yet they may be properly resorted to. Stimulants, under certain limits, are given with much advantage. If these means fail, the introduction of the hand within the uterus ought not to be deferred; this is a dernier resort to remove the coagula there accumulated, and to induce uterine action." 195.

"If the introduction of the hand become necessary, it should be retained till uterine contraction be felt; and if the hand be *almost expelled*, the better for the patient." 196.

During this time stimulants become highly necessary.

When collapse comes on after labour, without any apparent cause, the woman says she is extremely ill, the pulse begins to flag, the countenance assumes a pale cadaverous aspect, she becomes restless, and only expresses her feelings by a moan. Soon she is seized with violent pain across the chest, and within an hour or two after delivery expires. No satisfactory account has yet been given of the cause of this occurrence. It appears to Dr. R.

"To consist in a want of accommodation of the several parts within the belly to each other, under the new situation in which they are placed by the abstraction of pressure." 206.

In one of our patients it seemed to be produced by inanition from want of food, in a poor woman, who had a difficult labour occasioned by hydrocephalus internus, which distended the head of the child to a prodigious size.

In a dreadful scene like this, we must not be mere spectators: we must endeavour to restore the vital functions by strong stimulants, as brandy and æther; and to prevent farther collapse by applying general pressure on the abdomen, and particularly by compression of the uterine tumour.

Protracted labours are divided by Dr. R. into three orders: 1, those which are lingering; 2, those which cannot be surmounted by the natural efforts; 3, those which are combined with a relative disproportion between the size of the head and the capacity of the pelvis, through which it is intended to descend.

The first kind of protraction is produced either by an undue degree of resistance in the soft parts, by diminished energy of the propulsive efforts, or an improper position or direction of the head of the child. While the os uteri continues thick, resistent, and incompletely expanded, while the vagina is dry and contracted, and while the external parts show an indisposition to relax, no assistance from art can be employed with any prospect of success. The exhibition of opium will allay the violent spasmodic pains, which sometimes attend the commencement of parturition, and are not attended with a corresponding effect on the os uteri.

We have, however, frequently found that artificial aid has been required after the use of opium, before the process could be completed. In these cases, however, it is probable that the imperfect and partial energy of the uterus was natural and not induced. When febrile symptoms are evident, accompanied with pain in the head or vertigo, and an unusual rigidity of the os uteri, venesection is indicated. The blood should be abstracted from a large orifice in a short space of time, and if possible while the patient is sitting up. The injection of gruel, broth, or other simple warm fluids, into the rectum seems to expedite labour, especially where an accumulation of fæces distends the bowel. The state of the bladder is to be noticed from time to time; and when a tumour, occasioning pain and distress, is found just above the pubes, and distinct from the uterus, immediate relief will follow the introduction of the catheter.

The second genus of protracted labours is the least painful and complicated. Sometimes uterine action entirely ceases, and after an uncertain period returns to complete the process. In our patients, a laxity of fibre and inanimation approaching to mental imbecility have coexisted. Care must be taken to prevent a premature rupture of the membranes, and nature will generally do all that is needful. Dr. R. has had no experience with the ergot of rye, which was brought into notice in this country by Dr. Merriman;* and much doubts the propriety of its frequent administration. We are of opinion that repeated experiments and the most diligent observations will scarcely satisfy an unprejudiced person whether the effects, represented to result from this medicine, do actually proceed from it or from nature. The *post hoc* and *propter hoc*, Dr. R. justly observes, are not always sufficiently distinguished. In these lingering labours the uterus ought to be permitted to expel the whole of the child, that an uniform contraction may be effected, and the placenta detached from its uterine connexion at the same time.

In the third general cause of protracted labour, namely, mal-position of the head, we must be careful not to have recourse to artificial assistance too soon, nor to delay it too long. Twenty-four hours may be allowed to elapse, and after that time the nature of the pains, the state of the woman, and the degree of pressure to which the child has been exposed, must be duly considered. We are by no

* See our analysis of Dr. M.'s work on midwifery, in the Med. Chir. Review, for December, 1820.

means advocates for premature assistance; but we have always found in cases of doubt that it has been more advantageous both for the mother and child, when instrumental delivery has been decided upon sufficiently early, than when it has been delayed until the pains have ceased, when it is almost entirely artificial, and consequently more painful to the mother, and more injurious to the infant.

The second order of protracted labours is combined with a slight degree of difficulty. The pelvis may be malformed at the brim, in the cavity, or at the outlet, by diminution of the hollow of the sacrum, by protrusion of the spinous processes of the ischia, by anchylosis of the coccyx, by the approximation of the tuberosities of the ischia, and by want of space in the pubic arch. From whatever cause the difficulty might arise, necessity alone will justify us in the use of instruments. In order to be satisfied that this necessity exists, we must ascertain the state of the os uteri, the degree of the uterine action, the relative size and situation of the head, the length of the time it has remained stationary, the duration of the labour, the pressure on the soft parts, particularly the bladder and urethra, the appearances of the discharges, the degree of permanent pain in the uterus and abdomen, the obvious impression made on the system, the age and constitution of the patient, the state of her mind, the probability of the life or death of the child, and the temperature of the weather, &c. Having determined upon the expediency of employing artificial means, we must endeavour to select the most appropriate instrument. As long as the base of the skull remains above the brim of the pelvis, the short forceps or the vectis cannot be successfully applied, excepting by a few experienced and expert practitioners. In general neither of these instruments can be safely used, until the ear of the child is fairly within the reach of the finger. Dr. R. having been a pupil of the late Dr. Osborne, and having probably accustomed himself to employ the forceps, seems partial to that instrument. We are, however, of opinion, that the vectis will be found capable of effecting every thing which can be accomplished by the short or long forceps; for we have always found it to possess more extractive power than ought ever to be fully exerted, and that it may, when skilfully employed, be as early and successfully introduced as the long forceps can or ever should be. Much disappointment, we apprehend, has arisen to the inexperienced by their observing too implicitly the directions, which are usually given for the application of the vectis. The most advantageous position for this instrument is, we believe, over the angle, the ramus or the sym-

physis of the lower jaw, according to the position of the head. The occiput is occasionally a good situation; but we have a great objection to the os frontis, on account of the danger of injuring the eyes of the child. Care must always be taken to employ the vectis as an *extractor*, and not as a *lever;* for the latter description of force might occasion such compression on the par vagum and the vessels of the neck of the child, as to produce convulsions or death; and on the urethra of the mother, as may end in sloughing of that part, or the cervix vesicæ. Notwithstanding our partiality for the vectis, we admit that the forceps is the safer instrument in the hands of the young surgeon.

Dr. R.'s directions for the management of those cases in which there is a simultaneous descent of the head and arm, are exceedingly proper.

"When the hand or arm descends into the pelvis by the side of the head, if the accident be discovered in the early part of the labour, before the head has advanced so low as to occupy the cavity, it may be returned without difficulty, by passing two or more fingers of the left hand along the hollow of the sacrum, pushing up the descended part above the brim, and detaining it there till the return of uterine action lowers the head into its place; when this is effected, it rarely descends a second time. In performing this simple operation, no great force is required, if care be taken to give the elbow its natural bend. But if the arm shall happen to come low down in the first instance, and the head be suddenly propelled into the centre of the pelvis pressing upon the arm, this mode of management will seldom succeed; the pressure of the head renders the return impossible. The head must then be allowed to advance under the presence of the retarding arm. When this is the case, the parts of the arm below the point of pressure swell: they suffer all the effects of violent compression from above which, if the case be long protracted, sometimes produces ulceration and sloughing, after birth. The swelling of the arm is a proof that the child is still alive; yet, by its increasing bulk, it adds to the difficulty." 284.

A portion of pulsating funis descending while the head remains at or above the brim of the pelvis, may sometimes be returned successfully with the left hand of the accoucheur; but Dr. R. most truly says, that it too frequently slides down again.

The most troublesome and dangerous kind of protracted labours are those which are occasioned by a disproportion between the size of the head and the capacity of the pelvis. The most common cause of disproportion will be found in the pelvis itself; and when it does not possess a clear space equal to two inches and three quarters from the symphysis pubis to the prominence of the sacrum, a full-sized head

will either not pass at all, or with the greatest difficulty. The operation of *cephalotomia* may thus be required, but should never be performed without a full consultation.

"The judgment of one individual, however experienced, appears" to Dr. R. "in many instances, hardly sufficient to authorize the operation. Perforation of the infantile head is, to say the least of it, a horrible proceeding, from which every man would be glad to refrain if he possibly durst; and which he would always wish to defer, as long as a sense of professional duty, and the safety of the mother allowed." 310.

When the malformation is known or easily detected, the perforation is to be made as early during the labour as the state of the os uteri and of the soft parts will permit the safe application of the perforator. The contents of the cranium being evacuated, the extraction may be deferred for some hours, to allow of greater collapse and accommodation. When, however, the pelvis is much deformed, and the pains become strong soon after perforation, it is the best practice to proceed to immediate extraction, in order to avail ourselves of the powerful aid of the expulsive efforts. Dr. R. has commonly used the crotchet, and says that in those cases in which he has tried Dr. Davis's craniotomy-forceps, he has been much pleased with their extractile effects.

The practice of inducing premature labour will, in most cases, excepting when the deformity is extraordinary, have the effect of saving the life of the child, or at least of mitigating the sufferings of the mother. Dr. R. very properly ridicules the vulgar prejudice respecting the improbability of an eight months' fœtus being likely to live.

The uterus from the violence of its own contractions is liable to tear itself asunder. This dreadful and commonly fatal accident happens suddenly and without previous warning. In a preternatural presentation, the child with or without the placenta may be expelled into the abdominal cavity by the action of the fundus uteri. A rupture of the peritonæal coat of the uterus sometimes occurs without affecting the uterine structure. All the symptoms of actual rupture of the uterus, excepting those connected with the escape of the child, are observable in a diminished degree. A breach of the vagina also occasionally takes place, and, when extensive, is followed by symptoms much resembling those arising from uterine rupture.

Rupture of the bladder arises from inattention, is attended with many of the symptoms attendant on lacerated uterus, and is equally fatal.

Dr. R. suspects that rupture of the uterus is preceded by some injury that organ has sustained in a previous labour, and we are decidedly of the same opinion.

"I have never met with a rupture of the uterus in a first lying-in. The accident has happened, in those cases which I have seen, in a subsequent labour, and sometimes after several difficult births, though living children have been expelled. I am thence led to suspect, either that the uterus has received some local mechanical injury from the violence of its own efforts, or from the previous effects of artificial assistance, by which its structure is at this point weakened; or that it is thinned at the part where it gives way during the last months of gestation, by continued pressure against some prominent part of the pelvis.

"The breach of structure usually happens somewhere about the cervix; either anteriorly towards the symphysis pubis, or posteriorly towards the prominence of the sacrum. The rent is either transverse, or is carried laterally upward. The fundus uteri rarely gives way; yet its body and sides occasionally do." 383.

This accident may arise from an injudicious or violent endeavour to overcome the uterine contraction in a preternatural presentation; or it may spontaneously occur before labour is perfectly established, or as early as the fifth month of pregnancy.

Every case of ruptured uterus which Dr. R. has seen, has sooner or later proved fatal. Some women barely survive delivery; some live several days after it; and a few cases are on record, in which recovery has followed. It is proper, in every instance, to afford the mother a chance of restoration by as early a delivery as may be practicable. The placenta should also be speedily removed; and when it is necessary to introduce the hand for that purpose, the rent in the uterus may often be discovered by the fingers. An opiate, and afterward such medicines as the symptoms may require, should be administered. The immediate distress having subsided, inflammatory action supervenes, and at an uncertain period a collapse of the physical powers comes on, which terminates existence. This being almost invariably the consequence of rupture, Dr. R. thinks it may be a question worthy the consideration of the profession, whether the Cæsarian section ought not occasionally to be substituted for the perforation of the head.

We cannot do justice to the work before us without taking some notice of the valuable and well-selected cases, which illustrate the different subjects, and occupy a very considerable portion of the volume. The younger members of the profession will find them replete with practical information and many useful hints; and those who have passed a long

life in the practice of midwifery, and suppose themselves to be competent to manage the most desperate cases, will derive infinite satisfaction, *if they can be invited to read cases,* from observing the course which has been pursued by Dr. R. in situations which do not frequently present themselves in the most extensive private practice. The colloquial style which Dr. R. has adopted in relating his cases, has led him, no doubt unintentionally, into a tedious detail of uninteresting minutiæ, which swell the book, increase its price, and detract from its value. For instance, of what advantage is it to us to be told whether a chaise or a hackney-coach was sent to the door, or the doctor was obliged to travel on foot; whether the husband or man-midwife happened to fetch him in a hurry, or he received a note from a pothering old woman? We have another complaint to urge against Dr. R. which is, that he is occasionally too severe with his obstetric brethren. He should not rely too much on his advantages; nor, from being too often consulted by midwives and ignorant and timid practitioners, be induced to entertain a contemptible opinion of the rest of the profession. There is hardly a country-town in the kingdom, containing half a dozen surgeons, in which there is not, at least, one capable of deciding and acting in cases of emergency, both skilfully and successfully. These remarks originate in pure friendship to the author, whose work we have perused with great satisfaction and improvement, and can recommend as a safe and sure guide to successful practice. The unfortunate occurrences, as well as the favourable ones, are brought to view with extreme candour; and the dangers and difficulties are in all cases diminished by the excellent and decisive rules which are laid down. We are indeed so much pleased with Dr. R.'s practice, that we shall be quite impatient for the appearance of the second part of his work; and if he should receive our observations as kindly as they are intended, we think he will see the advantage of compressing into the body of his next book all the useful and valuable information he possesses, with the view of avoiding the introduction of cases, which are seldom read, excepting they are few, important, and condensed. The multiplication of books on every subject should lead authors to keep in view the old adage: μεγα βιβλιον μεγα κακον, "a great book is a great evil."

We have thus presented our readers with a view of Dr. Ramsbotham's book, which we hope will induce them to read it with attention, not neglecting to peruse the cases, which we must repeat contain most valuable facts; and we take leave of the author for the present in perfect good

humour, hoping it will not be long before we shall receive as much pleasure in displaying the beauties of his next production, as we have felt pain in exposing the few and trifling imperfections in the one before us.

> " Verùm ubi plura nitent in carmine, non ego paucis
> " Offendor maculis, quas aut incuria fudit,
> " Aut humana parum cavit natura."
>
> *Q. Hor. Flacc.*

XI.

An Analysis of the Leamington Spa, in Warwickshire; with Remarks on its Use, and medicinal Qualities. By G. H. WEATHERHEAD, M.D. Graduate of the University of Edinburgh, Member of the Royal College of Physicians, &c. Second Edition, 8vo. sewed, pp. 45. London, 1820.

THE author appears to have enrolled himself among the tutelar divinities, which, according to Pliny, were supposed to guard medicinal springs, and contribute to the happiness of mankind, as his motto pretty evidently insinuates.

> " Publica morborum requies, commune medentem
> " Auxilium, PRÆSENS NUMEN, inempta salus."

The writer of this pamphlet appears also to be a man of great and universal erudition, for indications of science and literature are profusely poured forth in every page, and even upon the most common occasions. Thus, instead of informing his readers that the LEAM is slow in its course, because the ground is nearly level, he learnedly pronounces it to be —"*torpid* in its course, from want of sufficient *descent*," which has a far greater air of classical elegance. "Leamington is a place of some antiquity, and retains the *agnomen* of priors from its being formerly attached to the monastery of Kenilworth."

Independently of the health-restoring waters of Leamington, numerous other attractions are here portrayed for the visiter. "If romance be the *gusto*, Guy's Cliff and Warwick Castle present themselves." "To the *pilgrim of genius*, Stratford upon Avon, the birthplace of the immortal Shakspeare, affords ample scope to indulge his warmest enthusiasm." P. 9.

We shall pass over our author's geological remarks, and also his chymical examination of the waters, since we find that Dr. Scudamore and he do not agree in their results. We have also stated enough in our last number, respecting the composition of these springs. "With regard to the

iron which the waters *testify* on the addition of tincture of galls," our author thinks it owing to the iron pipes through which they flow; and as to what is called the chalybeate spring, Dr. Weatherhead considers it to have no claim to that appellation. "Indeed it appears to be simply a brackish water, with a very slight impregnation of the usual saline constituents." 24.

Medicinal Properties. These waters are considered by our author as aperient and diuretic; their laxative operation being gentle, unaccompanied by griping, and leaving no relaxed or exhausted feeling afterward. There is no debility, he avers, produced by their use, even if continued daily for three weeks together. On the contrary, they increase the appetite, clear the complexion, and invigorate the whole system. The principal diseases to which these waters are more particularly applicable, are ophthalmia, dyspeptic affections, liver complaints, chronic dysentery, jaundice, scrofula, cutaneous complaints, paralytic affections, diseases of the joints, rickets, debility, and irritability.

The usual and best time, Dr. W. observes, for drinking the waters, is before breakfast. The common dose is a tumbler full for an adult, which is to be repeated in a quarter of an hour, the patient walking about in the interim. The walk is to be continued for a short time after the second dose, when tea is to be drunk freely for breakfast. Where the usual dose of the spring is too weak to produce its operation, a blue pill is sometimes taken over night—a plan which Dr. W. cannot approve of, as he thinks it better to quicken the action of the water, by adding some of the crystallized salt. Not being one of the intiated in the mysteries of the place, we cannot pretend to disipute the point; but from what we have seen of visceral disease, and from what we know of the practice of able physicians at similar watering-places, we should not be disposed to condemn the blue pill in conjunction with deobstruent waters.

In respect to dietetics, our author's remarks are of the most commonplace kind; and although he can so liberally criticise the introduction of poetical quotations into the writings of others, he hesitates not to press them, on all occasions, into his own service! And here we shall close this short article, with an observation directed to nobody, unless somebody should consider it as not inapplicable to his own case. It is this: that when a medical writer seats himself in the critic's chair, he should not "travel beyond his RECORD," and, under pretence of passing judgment on *books*, give vent to the most scurrilous abuse of *men*. Such conduct is now readily appreciated by the profession, and rewarded accordingly.

XII.

Practical Observations on the Colchicum Autumnale, as a general Remedy of great Power, in the Treatment of Inflammatory Diseases, both Acute and Chronic; and therefore as a Substitute for Bleeding in Disorders which are connected with increased Action of the Heart and Arteries. By Charles Thomas Haden, &c. &c. &c. Burgess and Hill, pp. 84.

Colchicum would appear to comprise the virtues of the lancet, cathartics, diuretics, specifics, sudorifics, tonics, aromatics, sedatives, and expectorants; in fact, just as the alderman's beef, in the Tale of a Tub, comprised the quintessence of peas, partridges, pheasants, and quails. It was used centuries ago in catarrhs, dropsies, fevers, bronchial affections, &c. and given up for want of correct therapeutical rather than botanical knowledge. Single investigations produce perfection of experimental skill in the use of a medicine, and insight into separate qualities, as far as they can be elicited by art. By disregarding coagulability and exclusion of common air, the French brought transfusion of blood into disgrace; but Dr. Blundell has restored it to notice by his accuracy. Colchicum is similarly resuscitated, and the Messrs. Haden have done all in their power to add effect and extent to its use. Mr. H. sen. is the Mentor, "giving the multiplied experience of an old practitioner not unskilled to judge;" and Mr. H. jun. self-confessedly "non æquis passibus sequitur patrem." Ere we enter into analysis, let us just say, that we shall occasionally break in upon the arrangement in our way, in order to make our foreshortening as replete as possible with the pith of the perspective before us.

Mr. Haden, sen. first administered the various preparations of colchicum, but he found them late, and then often violent, in effect; this was meliorated by uniting cathartics, but not effectually till it was given in the simplest form; the powder of the dry bulbs—in conjunction with a neutral salt—usually the sal polychrest. Thus he has employed it for more than six years "as his common prescription in gout, rheumatism," and "all diseases of excitement." It controls the action of the heart and arteries; is a "material auxiliary to the lancet," in diseases of excitement, and it seems to diminish action without causing any inanition of physical power; so that perfect health, rather than convalescence, demanding tonics, follows. The pulse becomes natural, and the general effect of the medicine is almost always

established in pure inflammations, after the purging has taken place, and even before. Bleeding is generally superseded, unless in affections of vital parts, and then is commonly required but once. Relapses are usually slight, and stand in need of slight repetitions of the colchicum. In acute cases not relieved in twelve or fifteen hours, increased doses, with calomel or the black dose, are given to accelerate the purging. Continuation is necessary, if inflammatory symptoms remain; but if prescribed at the dawning of diseased action, this will seldom be expedient. Mr. Haden's (sen.) posological rules are, to give from 2 to 8 gr. pulv. colchic.—sulph. potass. ℥j. (vel magis) in rose mixture, every four or six hours, under the general restrictions laid down. In chronic cases a daily morning dose is given (colchic. gr. v. sulph. potass. ℥j.) in a full draught of warm water, continuing it, if necessary, for weeks, with any purgative adjunct required. (P. 17.) Bleeding postponed is sometimes superseded, says Mr. Charles Haden, especially in inflammatory fevers, pneumonia, &c. On the contrary, though it may succeed by itself, in one case of pneumonia or inflammatory rheumatism, it may merely act as auxiliary, with active and repeated blood letting, in another. A case is given which expresses an important diagnostic remark, that invigorating diet and medicine produces relapse in the convalescent stage of sthenic diseases, with an unclean tongue. By its different appearances the author hopes, in time, to detect the primary situations of irritative and inflammatory action. In another description of irritative and inflammatory action, a learned friend of ours has surprised us by the accuracy with which he distinguishes the mucous from genuine phthisis, by the peculiar streak in the middle of the dorsum of the tongue, and its furred edges. A quick pulse certainly commands caution, but who has not seen the tongue furred from sheer debility, and become rubrous as a cherry on moderate invigorating diet, &c.? Sudden shocks to the nervous system produce a furred tongue; we have a case of gunshot wound of the thorax, where it was formed an hour after the accident—before any particular disturbance of the constitution had followed.*

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* Mr. C. Haden gives a case of acute rheumatism, reduced by Colchicum and blood-letting, but which afterwards rallied from the premature use of bark, the tongue being unclean. May not former drug render the symptoms passive by its sedative properties, while the disease itself may actually continue to exist? All remedies speedy in their action generally require to be proportionally protracted—or it will be found that the seeming effect is rarely real.

Mr. Charles Haden's mode of exhibition and rules for the limitation of the remedy do not materially differ from his father's. His officinal preparation is composed of one part of powdered colch. 3 carb. of potass, and 5 sulph. potass. The dose is ℥j. three or four times a day, with half a pint of warm water, in effervescence with tartaric or citric acid. After purging, if likely to be ill borne, the colchicum may be given alone. In chronic complaints calomel or blue pill, and aloes with ipecacuan, form a useful night pill, with one or two dram doses of the compound daily. The children's dose of the same varies from 16 gr. to ℈ij. Mr. H. sen. says,—

"In organic derangements of structure, *when occasionally* attended by inflammatory symptoms, the above treatment answers perfectly in curing *super-induced* inflammation; so much so, that at times the *general actions* are so much subdued as to give no notice, by symptoms, of the existence of the primary diseases; *thus*, in one case, gangrene was going on in the foot, whilst the inflammation which produced it was subsiding under the use of colchicum."

Colch. gr. vj. sulph. potass. ℥j *omni mane* has never failed with long perseverance in chronic rheumatism. Plethoric hæmorrhages, passive or habitual, and consumptions, (though "it does not cure,") are relieved without the expense of blood, and the severe consequences of accidents are averted by it.

The elder Mr. Haden's horse had a violent inflammatory attack of the chest and joints, which yielded *too* effectually to doses of colch. ℥ij. magnes. sulph. ℥j. 6^{tis} houris, but the animal was much purged, and had colic—which is attributed to overdosing, and neglect of spice in the equine prescription. We have seen fatal colic follow the administration of a cold clyster to a horse.

"In the fevers of children, in which colchicum generally succeeds, opening medicine is often an indispensable requisite in the prescription."

In the case of a child nothing availed till a decided purgative brought away a load of fæces. In nine instances out of ten this case will represent the just treatment of complaints of children, and colchicum will, in our opinions, have nothing at all to do with it. Indeed, throughout the whole of these cases, we cannot help suspecting that the secondary component is not raised to its just level; but Mr. Haden, however, admits throughout the indispensable necessity of combined purging. In lumbago great stress is laid upon using warm bathing, and warm beverages in conjunction; sometimes calomel and antimony is recommended.

Another case multifariously treated finally appeared to yield to prussic acid. A case, after three weeks mal-treatment, yielded to one dose of colchicum. Mr. Haden, sen. reports one affecting all the limbs.

"On the day but one after taking (colchicum) he (the patient) was met walking in the street, and was very soon well. Five doses of the medicine were taken."

Some interesting cases of bronchitis, in the worst form, exhibit its utility, as first stated by Dr. Hastings, and also recommended by Dr. Abercrombie,* who uses it in combination with super-tartrite of potass.† Infantile pneumonia, inflamed breasts and nipples, with constitutional irritation, and simple fever, are among the cases detailed as successfully treated. Mr. Haden, jun. contributes these cases, it being stated in the early part of the work that Mr. H. sen. laid the foundation for these extended trials by giving it invariably in rheumatic inflammatory fevers, catarrhs, influenza, and fevers of puerperal patients, in which last it "has acted like magic." A severe case of mixed bronchitis and pleurisy yielded on the third day to colchicum, except that the expectoration and cough continued, which relapsed on making an exchange for tartar emetic and opium, and yielded finally to colchicum resumed, with calomel and V. S.

Colchicum, when disagreeing, excites languor and sickness, but this is not peculiar; squills and antimony produce the same *loathing* nausea; but having caused this effect by digitalis and vin. antim. we have once or oftener substituted colchicum, without re-exciting nausea, as might be expected, the stomach being first reconciled by gentle alcoholic stimuli. Colchicum, with us, has just proved useful in a case of inflammatory rheumatism of the thorax, but it now disagrees in the foregoing manner. In cases of gout with hysteria in the female, we have found it also generally obnoxious to the stomach.

Having mentioned Mr. Haden's decisive cases, we shall briefly notice the section which comprises the "subacute and chronic."

"*On the same principle* the cutaneous diseases which so abound among the patients who apply for relief at the Chelsea and Bromp-

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* Pathology of Consumptive Diseases, *Edinb. Med. Journal*, LXVI. *Jan.* 1821.

† See Rev. on the Mucous Membrane of the Thorax. *Art.* I. *No.* 3. *Med Chir. Rev.*

ton Dispensary, are more benefited by the use of colchicum than any other remedy." 87.

A very impressive case is given in confirmation, consisting in porrigo favosa, with constitutional affection. When the disease is purely cutaneous, Mr. Haden does not observe its powers to be exerted so successfully; this is just what the pathology of cuticular affections would lead us to expect. In nine cases out of ten we believe this form of disease to be a salutary exchange of diseased actions with some important viscus. Whoever shall have read Dr. Willan's entertaining, but too costly, quartos, will find this proposition remarkably verified by statements, though little taken into account; and whoever has an eye and a mind for tracing up the first phenomena of morbid actions, will be the more convinced of this important physiological truth. If one internal organ more than another is connected as a primary link in the chain, we believe it to be the liver. Some fœtal dissections which we have lately made, have induced us to entertain an opinion that many parts of our organization, colour of the skin, its texture, the characteristics of the hair, and temperament itself, are somewhat connected with the early developemeat of this great gland and its economy; there may be also a reciprocal dominion of the brain in this early connexion. We hazard this as mere conjecture. If it be too wild, we err with the ancient philosophers, who grounded their temperamental distinctions much (too much perhaps) upon the qualities and supposed various conditions of the bile. The first and more substantial theme of these remarks, relating to the connexion between establishments made on the skin for guarding masked derangements of internal organs, especially the liver, is confirmed not merely by the action of the colchicum, or still more of the taraxicon leontodon, but by the celerity with which the skin is often rendered immaculate in the worst dermalogical cases, by the use of mineral waters, as the Cheltenham spas. In a short period we hope to see a most interesting physiological and pathological treatise, conceived in these principles, and illustrative of some important laws of the animal economy and mucous system (using Bichat's phrase) from the pen of one of our first veterans. Whenever it appears, there will be much to excite attention, and perhaps applause, as one of the most original efforts of an original and matured mind.*

* We suppose our reviewer alludes to the forthcoming "Letter to Dr. Charles Parry, by Dr. Jenner, on the Influence of Factitious Eruptions." We shall hail with pleasure this long-matured production of that venerable philosopher. *Ed.*

The influence of colchicum is displayed favourably in numerous and dissimilar affections, corresponding in one point, the presence of febrile excitement. Let us solicit regard—

"To that of threatened consumption, and that of actual phthisis, as being interesting in many points of view; to the two of inflamed leg, as fully illustrating the great powers of colchicum, in remedying states of vehement local excitement; to that of tubercular cutaneous diseases; as proving its efficacy in the treatment of skin disorders, when joined with an excited state of the constitution." 69.

Let us add—to that of derangements of the digestive organs, sometimes accompanied with spontaneous eruptions; bursal inflammation, with constitutional irritation; hysteria, with excitement; cynanche tonsillaris; boils; indisposition consecutive upon infantile laryngitis, as adapted to impress the mind with comprehensive ideas of the powers of this versatile and extraordinary galenical.

Mr. Haden confidently recommends the powder as more safe and certain, in exception to tinctures of the bulb, but speaks with more satisfaction of the preparations of the seeds on Dr. Williams's authority. The sanguine expectations of the Messrs. Haden are strongly sanctioned by the reports of Dr. W.* Dr. Williams's experience of the common preparation closely accords with Mr. Haden's in some cases being inert, in others exciting excessive action of the stomach and bowels, so that it has occasionally proved fatal. Perhaps much is attributable to not previously clearing the bowels. It is often observed by practical men that powerful medicines are uncertain and capricious without this caution; digitalis given without effect for some time, will sometimes act by a sudden burst, as in the full force of combination from the same apparent neglect. There are numerous affections in which, if the membranes and muscular coats of the alimentary tube are not first excited by purgatives, want of action and excitability may be expected after the exhibition of other stimuli. Dr. W. thinks the seeds may be extended to all painful diseases of the *asthenic* kind, and we know but of one objection—their extreme dearness and scarcity. A learned physician having the care of a large institution, has been trying the seeds, with mixed success, but less than anticipated.—There is a rheumatism connected with disordered functions of the duodenum, in which we have observed colchicum to fail.

* See Med. Chirurg. Review. March No. Favourable Reports. April. No. Medical Repository.

Some modern as well as the ancient writers on materia medica consider colchicum inert, except in spring and July. Mr. A. T. Thompson, whose authority is great on such points, deems a blue stain, produced by rubbing colchicum with alcoholic tinct. guiaci and acetic acid, a test of its perfection. We have heard much of Mr. T.'s habits of accuracy in the nicer operations of chymistry, but we are disposed to think him in error in maintaining the reverse of Mr. Battley's proposition, that drying at a high temperature (170) extinguishes the efficacious properties of the bulb. The most powerful powder which Mr. C. Haden has met with, was gathered in September, and dried at 130°. (p. 77.) A communication addressed to us by Mr. J. Fosbroke, a young practitioner in the country, and an occasional contributor to the periodical literature of the day, concurs with this statement. We shall here introduce a short extract.

"I have of late had much practice in gout and rheumatism, with one very extraordinary case of masked gout. I am tracing up a series of minute observations on the action of colchicum, Pradier's poultice,* (which does wonders in rheumatism as well as gout) and on sulphureted hydrogen, &c. which I shall make known in due time. Finding the acetum colchici of the pharmacopœia, obtained from the summer bulb, too inert, I was obliged to betake myself to an extemporaneous preparation formed from that obtained by the digging of the root, and superintending it in all its stages myself. The officinal composition of the pharmacopœia is formed by the rad. colch. ʒj to acid. acetic. Oj. whereas the vinum colchici is in the proportions of wine ʒxxiv. to bulbs ℔ij. a disparity which seems inconsistent. From this opinion and disappointment in the effect of the pharmacopœial preparation, I macerated at the beginning of October ℔ij. of the fresh bulbs in three pints of common vinegar for a fortnight, and then added sp. vin. rect. ʒi. to preserve it. This was administered in the dose of a drachm to a female gouty patient. The kidneys, which were previously in a torpid state, yielded in one night a gallon of urine; it also acted on the bowels several times, produced some nausea, perspiration, and uneasiness of the stomach and intestines. I have since been obliged to give it in very small doses, as it continued to evince full powers. This experiment seems to jar with the opinion that the root is acrimonious, and endowed with its sensible qualities as a drug *only* at midsummer, and not in the autumn, when I took it up. According to my observation, successive crops spring up from July to October, the first crop being more ample than the latter, which is longer in attaining maturity. The tunics were full at this time of interstitial fluid, extremely pungent in smell. I prefer the

* Essay on the Treatment of Gout in all its Forms. By James Johnson. M D. &c.

acetic preparation, because, as Dr. Scudamore observes, it may be administered in the simplest form by neutralizing the acid with an alkali or alkaline earth.* Thus given, it loses much of that flavour and odour to which the sensitive and feeble stomach is very repugnant. It appears to me, in one or more cases in combination with magnesia or Epsom salts, to have been as periodical in its purgative action as aloes. Dr. Paris remarks, that if diuretics are given in purgative doses, they fail to excite diuresis, which seems true, and points out caution in the exhibition. An eminent general practitioner in the country informs me that in a case of dropsical effusion, where other remedies had failed, he had obtained a rapid cure by the administration of colchicum. My use of it has been confined to cases of gout and rheumatism. Previous to maceration I cut the bulb into thin transverse slices, and dried them by a moderate heat."

It remains for us to state our own experience, and that of some of our friends. It has been our habit to give the acetous preparation, as directed in Dr. Scudamore's history and treatment of gout, modified in combination, as suited particular circumstances. In gout we have not once failed, in a considerable number of cases. In one more obstinate than the rest, where the effects of an overdose were complained of, the disease was considerably mitigated. When suspended, on similar account, in other cases, good effects have appeared after tranquillity has been restored to the organs of digestion and secretion. We have experienced its beneficial effects when combined with gentle laxatives to act mildly, surely, and equally, upon the intestinal canal, liver, kidneys, and skin. To effect this comprehensive influence in constitutions of much diversity, we have been obliged to vary the combinations as circumstances required. If diuresis demanded to be pushed, we have added digitalis or elaterium; in obstruction of the biliary system, the liver may be expeditiously relieved through the medium of the kidneys, by adding decoction of dandelion, a medicine to which we never found a patient unwilling to recur. In spasmodic cramps, and irregular nervous spasms, the stomach may be guarded from aversion to colchicum by the union of sulphuret of potass. As a purgative in gout, the decoct. aloes co. which neutralizes the acetum colchici when given with it, is eminently useful.† Thus administered, the acetum is almost

* On Gout, 3d Edition, p. 186.

† In adult cases, where the mucous membrane of the lungs has been embarrassed by vitiated mucus giving rise to a spurious asthma of the spasmodic kind, while at the same time the lining coat of the alimentary canal has been similarly loaded, causing singular anomalous and sympathetic affections of remote muscular structures, and pains of the joints.

equivalent in simplicity to the powder. As medical writers often catch the water instead of the fish, in reasoning on the operation of medicines, we shall speak of the *modus operandi* of colchicum with caution. We attribute much to its equal and divided effects upon the organs of secretion, when in combination—much to the simultaneous influence of these manifold qualities—much to its tendency to relieve plethoric circulation in the veins; and we value it for diminishing nervous and arterial energy, so little at the expense of mucular power. It is no depreciation of the value of colchicum to say, that we have no unequivocal proofs of its efficacy when singly exhibited; the art of combination is too seldom well managed, and the judicious use of every medicine greatly consists in thus creating and varying the effect. In Mr. C. Haden's cases, we do presume that he has given its powers a rather unnatural direction; and indeed he admits the too liberal addition of purgatives, and thinks that his practice may have been consequently less efficacious than his father's. Perhaps it is, Dr. Paris says, too much diverted from the kidneys. The fundamental principle on which Dr. Scudamore has founded his treatment of gout, was derived from the early reports of the action of the eau medicinale, viz. simultaneous excitement of all the secretions.* We have means of stating, from a relation of Dr. Huisson, that the basis of this celebrated specific is a concentrated preparation of colchicum and briony. This or any other *uncombined* preparation of colchicum will always probably be injurious in most affections, but we are sorry that a medicine possessing such powers should have undergone no trials in modification. In the case of an individual of the sanguine temperament, with hereditary gout, the eau medicinale produced, to our surprise, that singular black exudation of the gouty joints, which has been observed upon Pradier's poultices, or its substitutes. To continue speaking of colchicum in its general bearings, a medical friend informs us, "I have been using the vin. colchic. in inflammatory rheumatism translated from the wrists to the pericardium and pleura. Its immediate operation was cathartic and emetic, and the patient suddenly recovered as far as the chest was concerned. The disease returned in a

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we have found nothing that exceeds the acet. colchici neutralized with magnesia, and combined with tartar emetic, for removing the *irritative* action of the mucous membranes, by restoring the languid action of the skin, and dislodging, by expectoration and purging, viscid mucus and slime from the bowels and trachea.

* See article Gout, in Rees's Cyclopœdia.

mitigated form in his extremities, and hung partially about him for some time. The patient being at the brink of the grave, I prescribed the colchicum with scarce a ray of hope. In chronic rheumatism it generally does good. I have now an athletic patient, 23 years of age, who has had acute rheumatism in the knees and arms; it left these parts, and his chest became affected; the pericardium most prominently. Copious v. s. and vin. colchici. He is progressively improving." We ourselves have recently been using vin. colchici in metastatic rheumatism of the pleura and pericardium without effect in 3j. to 3ij. doses. In this dreadful case of two months standing, there have been six general blood-lettings, at very short intervals, blistering, purging, sinapisms, digitalis, leeching to syncope repeatedly, with slight mitigations only. The patient is now living, but circumstances have prevented our using the powders, or further attending to the case. We have lately checked the progress and mitigated the pain of an abscess deeply seated in the shoulder of a rheumatic patient by the acet. colchici. In exhibiting it according to Mr. Haden's formulæ, in cases of biliary obstruction, not mechanical, in hysteria, with vascular irritability, acute inflammation of the mucous membranes of the intestines, apoplectic determinations, we have by no means found it infallible, or to be confided in alone. An extreme thirst, with a subjection of active symptoms for a time, not unlike the effect produced through the medium of the brain and nervous system by that class of medicines called sedatives, has followed in many instances. In children's cases, as urticaria with intestinal disorders, and similar affections, we find it very efficacious. Professor Herberski, in the chair of materia medica at the university of Wilna, has personally informed us, that in Germany and Poland it has been long used and overrated, but that it is considered to possess considerable influence in emulging the biliary and urinary glands.

We have been so closely busied on the valuable parts of Mr. Haden's work, (and as a collection of facts there is very much that is valuable) that we have been sparing of criticism. We ought to have remarked some incongruities in the application of the proofs to the propositions; but above all, we consider his general arrangement unconformable to any law with which we are acquainted, except the laws of writing in the order of a day-book, from which his work appears to be a transcript.

We conceive that in his title-page Mr. Haden has promised too much—particularly as to the favourite medicine being a substitute for bleeding in inflammatory complaints

—a position contradicted, we imagine, by some of his own facts. These trifling strictures, however, we are confident the author will take in good part, like a man of sense and science, who can distinguish between wanton criticism and candid commentary.

XIII.

I. *A Treatise on Gunshot Wounds, on Injuries of Nerves, and on Wounds of the Extremities requiring the different Operations of Amputation; in which the various Methods of performing these Operations are shown, together with their After-treatment; and containing an Account of the Author's successful Case of Amputation at the Hip-Joint, &c. &c. &c. With five explanatory Plates. Being a Record of the Opinions and Practice of the Surgical Department of the British Army, at the Termination of the War in Spain, Portugal, and France, in* 1814. *The Second Edition, considerably enlarged.* By G. J. GUTHRIE, Deputy Inspector of Hospitals during the Peninsular War; Surgeon to the Royal Westminster Infirmary for Diseases of the Eye; Consulting Surgeon to the Western Dispensary for the Diseases of Women and Children; Member of the Medical and Chirurgical Society of London; Associate of the Medical Societies of the Faculty of Paris, and of Aberdeen; Lecturer on Surgery, &c. One vol. octavo, pp. 526. London, 1820.

II. *Principles of Military Surgery, &c. &c.* By JOHN HENNEN, M.D. F.R.S.E. Deputy Inspector of Hospitals. *Second Edition.* Edinburgh, 1820.

III. *Dictionaire des Sciences Medicales, Tom.* 43, *Art.* "*Plaies D'Armes à feu.*" Par M. M. LAURENT et PERCY.

——————— factorum est copia nobis,
Res gestæ Regumque Ducumque et Tristia Bella.

"Je vais dans les loisirs d'une paix, helas! trop certaine, preparer, si je puis, de nouveaux secours aux guerriers." *Percy.*

THE revolutionary war has furnished ample materials to swell the medical as well as the military annals of Europe. In this long and sanguinary conflict, man was but too often placed in situations which were calculated to call forth the whole energies of his nature; and obstacles, previously considered insurmountable, were overcome with a celerity—it

might be almost said, with a *facility*, truly astonishing. In our days, armies from the North were seen marching in the hottest season of the year, over the burning sands of Suez —while those raised on the luxurious shores of the Mediterranean were braving a Russian winter on the snow-covered plains of Moscow. Whole fleets of LINE-OF-BATTLE SHIPS have rushed forth from the ports of Britain, in the very depth of winter, and fearlessly steered their course amid the dangerous syrtes of the Rhine and the Scheldt, regardless of the tremendous storms which assailed them from the West, or the still more formidable fields of ice which came drifting on them from the East. In this eventful period the mental and corporeal powers of British soldiers and sailors were put to the test of ultimate exertion in every clime. They were exposed to all the "skiey influences" of the torrid and the frozen zone, in addition to the havoc of warfare, and the ravages of disease. Did the medical officers of our fleets and armies participate in the moral and physical excitement produced by these portentous scenes around them? Unquestionably they did. That grand parent of invention— NECESSITY, was ever at work, prompting measures to obviate rising difficulties, by which means these officers ascertained the real extent of the powers of Nature and Art in a far more accurate manner than ever could be done in private life, where, not only a multiplicity of means are used, but a multiplicity of counteracting agents are perpetually interfering and leading to error. No one is now so unjust as to deny the numerous improvements which medicine and surgery have derived from the observations and experience of practitioners in the public service of their country: and no-

portant points of military, and indeed we might add, civil surgery. The works of these two officers form a lasting trophy to the *surgery* of the late war, and much do we hope that military *medicine* may be enriched by some similar publications, in the same manner as a Desgenettes and a Broussais have acted in France. The Practitioners of the Army, Navy, and Company's service have greatly extended our knowledge of the diseases affecting our countrymen between the tropics and in the warm latitudes of the Mediterranean; but the diseases from which our troops must have often suffered in the Peninsular war, are yet without a historian, excepting Dr. Somers on Dysentery, and some detached papers in periodical publications.

Mr. Guthrie, with a very laudable attention to the convenience of his brethren, has published the *entirely new* part of the present work separately, for the accommodation of those who purchased his work on "wounds of the extremities requiring amputation," published a few years ago. It is proper to observe, however, that in reprinting the *latter* work, he has made some important additions, which we shall notice in the proper place. Meantime our analytical labours must be directed almost entirely to the *first* or new part of the volume before us, which is occupied with the important subject of gunshot wounds in general and in particular.

When arrows were exchanged for ball-cartridge, the lodgment of these latter projectiles in the human body caused great alarm in the minds of our chirurgical brethren of the fourteenth century; and the idea of such wounds being poisoned, led to dressings (boiling oil for instance) more tormenting than the original injury. An accidental want of oil discovered to Ambrose Paré the cruelty of this mode of treatment, but it was long before a rational one was substituted in its stead. To this day some erroneous notions respecting gunshot wounds continue to prevail. For instance, being *contused* wounds they have been supposed to be comparatively free from pain and hæmorrhage, and to be almost inevitably attended with suppuration or sloughing—errors, Mr. Guthrie observes, which operate with fatal influence on the practice growing out of them. The *degree* of contusion depends on the shape of the projectile, the force of its impulsion, and the resistance opposed, the symptoms and appearances being influenced accordingly. Neither are gunshot wounds painless, at the moment of infliction, as some have supposed. In some instances the pain is trifling, being, cæteris paribus, in an inverse ratio to the degree of contusion. In fact, however, the sensation of

pain varies almost with every shade of idiosyncrasy of constitution:—"for in two persons suffering apparently from the same kind of injury, and with the same detriment, one will writhe with agony, whilst the other will smile with contempt." Generally speaking, the greater the velocity with which the projectile is impelled—the rounder and smaller the size—and the less the resistance opposed, so much the less will be the sensation of pain produced by the accident.

The subject of hæmorrhage is one of much greater importance than that of pain. There is generally some bleeding attending gunshot wounds, even where no vessel of calibre is divided. In wounds of the face and neck the hæmorrhage is generally considerable. If the ball happen to strike any hard substance, so as to be flattened or angulated, before entering the human body, the wound will be lacerated rather than contused, and the loss of blood probably the greater.

"The colour of the blood will be arterial, but a wound of a large artery is not to be feared, unless it be emitted in great quantity, and per saltum, and continues to be poured out of a bright colour and without intermission, in spite of the common pressure, or means made use of for its suppression; in which case the lesion of an artery of some magnitude is indicated. The bleeding from a simple flesh wound soon ceases, and does not return, except some violence be done to the part; whilst, in a case of wounded artery, it sometimes continues until the patient dies, which is frequently the case when a large artery is partially divided." P. 6.

If the artery be completely divided, a considerable quantity of blood is quickly lost, and syncope generally arrests the flow, though death may be the consequence in some cases. This syncope, for the most part, takes place when a limb is carried away, and dangerous hæmorrhage usually ceases before there is time for a tourniquet—nor does it generally return:—if it do return, the patient's life will be lost, unless assistance be on the spot. It will not, Mr. G. repeats, usually return, after spontaneous cessation, unless from impropriety of conduct or accidental violence—"neither will a due degree of suppuration or sloughing in the wound effect it."

"The chance of secondary hæmorrhage is but trifling; and if in such cases as these it is so, there can be no doubt but that it must be next to nothing in others where no vessel of importance has been injured. On the separation of the sloughs, a little blood may occasionally be lost, but it is generally caused by the impatience of the surgeon, or the irregularity of the patient, and seldom requires attention. Sometimes at this period, that is, from the eighth to the

twentieth day, a large artery will give way from sloughing or ulceration; but the proportion of cases requiring the ligature, of arteries, will not be greater than three or four in a thousand taken indiscriminately, exclusive of hemorrhage caused by hospital gangrene, inordinate sloughing, or broken bones, which are not the usual causes hitherto alluded to as inducing secondary hæmorrhage; and which, as they may almost always be avoided by proper care and management, cannot with propriety be considered, as legitimate causes." 9.

Even where the elasticity of the artery enables it to recede (when not hit direct) with the injury of some of its coats, it does not necessarily follow that sloughing and hæmorrhage shall be the result. Mr. G. has known instances where the coats inflame, and the canal of the vessel is obliterated. He has a preparation where a ball passed between the femoral artery and vein, without dividing either; and, in other instances, he has reason to believe, the vessel completely recovers itself. In fine, our experienced author concludes that the opinion, *that gunshot wounds do not bleed at the moment of infliction, unless a large artery be cut—and that they generally bleed, and often profusely, after suppuration*, cannot be too soon banished from the minds of surgeons, as leading to unnecessary anxiety and bad practice.

Our surgical readers are aware, that much discussion took place a few years ago, respecting the propriety of *immediate* amputation in cases of gunshot wounds requiring that operation, and that as an argument for this measure, it was asserted that no constitutional shock, as it was termed, took place in cases of wounds from cannon shot—consequently there was no necessity for a moment's delay. Mr. G. is of a different opinion.

"When an organ of importance has been injured, and the blow severe, as by a cannon or grape shot, or shell, or from the fracture of a bone, and even from the attention being directed to the receipt of an injury from the situation in which the soldier may be placed, a peculiar constitutional alarm ensues in a much greater degree than would follow an injury of equal magnitude, precisely in the same spot, from any other cause. It affects alike, although not in an equal manner, the coward and the brave, the man of learning and the unlettered soldier. As it is, however, an affection often greatly augmented from an association of ideas, so is it more immediately controlled by men of sound judgment, or command of mind, and is more certainly removed by the knowledge of the injury being of little consequence." 10.

To this subject we shall return a little farther on. In the mean time, as Mr. Guthrie properly observes, the continuance of the constitutional alarm or shock ought to excite great suspicion of serious injury, and render us guarded in our prognosis. Here Mr. Guthrie relates several interesting cases, happening in various ranks, illustrative of this commotion, and proving that the infliction of a gunshot wound of any importance, is *generally* followed by more or less

hæmorrhage, pain, a peculiar anxiety, alarm, and loss of animal and organic powers, characteristic of this kind of injury.

As a ball very commonly carries in with it some portion of clothes or other extraneous substance, it is desirable to ascertain if it have passed out again—and yet it is not always possible to decide on which is the exit or which the entrance of the missile. The position of the man, at the time of receiving the wound, will much facilitate this judgment. The most marked peculiarity attending the entrance of the ball is "a circular depression capable of admitting the little finger, and of a livid colour; whilst the exit is more ragged, not depressed, sometimes little more than a slit or rent." These appearances, however, are by no means constant, or so strongly marked—especially if the velocity, and, consequently, impetus of the ball be great; for then the entrance and exit will often be considerably similar. But we must pass over a great deal of curious and interesting matter, relative to the course, lodgment, and ejection of balls, detailed from page 20 to 27, and to which the surgical reader ought to pay the greatest attention. We come now to the mode of treatment; and here Mr. Guthrie wisely directs the surgeon to a consideration of the patient's constitution, as well as the local injury, for inattention to this point, he thinks, has caused much of the discrepancy of practice in gunshot wounds.

The ball, in its rapid course through a muscular part, deprives of sensibility, or even life, the immediate track of the missile. These contused portions, and the blood extravasated among them, must be thrown off by the surrounding healthy parts, leaving, of course, a track much larger than at the moment of injury. Inflammation is the process of Nature, set up for the repair of the injured parts, and on the due management of this, our good or bad success depends. The difference, however, in constitutions, must always require a great latitude in the treatment. People between 15 and 40 years of age can, in general, best bear the inflammation and fever attending wounds, and the treatment necessary to regulate them. In good constitutions the increased action may be so balanced by moderate bleeding, that fever and inflammation may go on for several days, and terminate without detriment.

"In bad constitutions this is impossible, for if evacuations are at all indicated, they must be effected in the first days, I might even say, hours, for the patient will otherwise be unable to bear them; his powers will sink, and the fever, or inflammation, will be brought to an unfavourable termination. A good constitution can bear a high action and a direct reduction of power, for a sufficiently long time. A bad constitution can bear neither for half the same period; and if the reduction of the action is to be attempted by reducing the power, (that is, by bleeding,) it must be done at the commencement. Persons of bad habits will almost always bear bleeding once. Old people bear it much better. I am quite certain, from long experience, that many of both descriptions are continually lost, from a want of decision in practice, in the first instance. An ulterior state of disease is

too much regarded, and the consequence is, that we have so many unfortunate sequelæ." 37.

In our *systematic* works sixteen ounces of blood were, till lately, generally ordered to be abstracted in acute inflammatory diseases of the brain, heart, lungs, stomach, intestines, &c. But, as Mr. Guthrie justly observes, this quantity will not suffice. In good constitutions it may mitigate, but its repetition even will not remove the disease. Army and navy practitioners have, of late years, altered the opinions of the profession, and demonstrated a bolder and a safer track. So far back as 1801, Mr. Guthrie was led to adopt decisive depletion in acute diseases, from the bad success attending the then common treatment, as laid down in books, and the ravages of disease apparent on dissection. In a digression on peritonæal inflammation, Mr. Guthrie seems to question the propriety of considering diseases as differing according to the different structures of which the organs are composed—"without due attention to their intimate connexion and mutual dependence on each other." No one can doubt that disease readily passes from one structure to another; but the fact of the structures modifying the nature of the disease, is now put beyond all manner of doubt. What practitioner has not seen disease confined for weeks and months to the mucous membrane of the bowels, without any affection whatever of the peritonæal covering, and *vice versa?* In our article on peritonæal inflammation (No. 2.) we stated it thus:—

"Nothing is more certain than that almost every acute inflammation of the organs above mentioned begins in a single tissue of their structure, with corresponding symptoms, and spreads thence to other tissues, with more or less rapidity, according to the violence of the disease, and the mode of treatment, accompanied also by a train of phenomena indicative of the new structures successively invaded." P. 162.

We do not see any reason to alter this statement, which is the one Mr. Guthrie has objected to; but it is necessary to observe, that by *peritonæal* inflammation we never meant inflammation of that portion of the membrane reflected along the inner surface of the abdominal parietes, but that portion, and that portion solely, which is reflected over the stomach, intestines, &c. forming, to all intents and purposes, as regular a constituent part of their structure as the subjacent muscular or mucous coats. This being explained, we believe Mr. Guthrie and ourselves are precisely of similar sentiments, both in the pathology and treatment of this dangerous class of diseases. We are particularly happy, too, in having the corroboration of Mr. Guthrie's opinion respecting a point which we contested with Dr. Abercrombie. "Acute inflammation," says our author, "of the peritonæum covering the bowels does never take place without the bowels being costive." Mr. Guthrie asks here, what is the diagnostic symptom which indicates this degree of enteritic inflammation from that which involves the other structures of the gut? We answer, that he himself has furnished the diagnosis—*constipation*. Did Mr. Guthrie ever

see a case where the *mucous* structure of the intestine was inflamed, primarily or secondarily, without diarrhœal or dysenteric symptoms? We are bold to say he never did. Where, then, is the impropriety of investigating the separate affections of these membranes, seeing that they do really often exist in nature—though often indeed blended, especially in the progress of disease. Here Mr. Guthrie relates a very curious case of inflammation of the stomach ending in an effusion of a pus-like matter into the cellular texture of the organ, which, on dissection, was found so changed from its natural appearance, as to resemble the thick smooth part of boiled tripe. It must be observed, however, that this disease is so very rare, as not to be taken into consideration in actual practice. Speaking of diagnostic symptoms, we shall introduce the following passage corroborative of an observation made by Dr. Dickson in page 166 of our second number of this series.

"If there be a symptom more observable than another, it is one which is yet common to all vital organs. I mean anxiety. The able observations of Dr. Dickson, of Clifton, noticed by Dr. Johnson, allude to this, although they more properly refer to the appearance of the countenance, as indicative of pain. The anxiety I intend to distinguish as a symptom, I have alluded to in dangerous wounds, and is not only of the mind, as shown by the countenance in a very expressive manner, but of the body, as demonstrated by great uneasiness. Anxiety is constantly observed towards the fatal termination of acute diseases; but when a vital organ is affected, whether it be its internal structure or not, this symptom is often present at an earlier period. In some cases it is a more certain sign, than the pulse, of great derangement; in others, more distinctive than pain, which is sometimes referred to a part that is unaffected, and is, in all, indicative of the greatest danger, and demonstrative of the necessity of corresponding exertion on the part of the practitioner. In the case of gastritis, which I have related, the pain was referred so steadfastly to the region of the navel, that enteritis was looked upon as the principal disease, whilst no sign of it could be discovered, after death, in the parts corresponding to it." 47.

Mr. Guthrie states, that in the year 1813, he met with several fatal cases of inflammation of the heart, in hard drinkers, some from metastasis of rheumatism. In none of these were the symptoms well marked. "Indeed," says our author, "inflammation of the heart frequently exists without being suspected, and more especially when combined with inflammation of the chest." We know, from some experience, that in no organ is inflammatory action more frequently or more completely masked than in the central organ of the circulation.

"There is one symptom I have remarked, however, in an extraordinary degree, in all the cases I have seen, and that is *extreme anxiety;* and in a much greater degree than other symptoms would appear to warrant, or than can be accounted for from the apparent nature of the disease. In obscure cases of inflammatory affection of

the chest, I consider it more constant, more pathognomonic of carditis, than fainting or irregularity of the pulse." 48.

Similar observations have been made by gentlemen in this and other countries. We cannot indeed wonder, that great anxiety and great *mental despondency* (a symptom very generally accompanying disease of the heart) should be produced, when a viscus so essential to existence is labouring in its function. Here Mr. Guthrie relates a case showing the necessity of our being on our guard when this anxiety is present, without adequate apparent cause.

"A soldier applied to me for an external injury, labouring at the same time under some internal complaint, for which he had been recommended to take bark, on the supposition that it was an ague. I found on inquiry that the paroxysms were not regular, that the rigours were only slight shiverings, the heat was permanent, the skin dry, the sweating stage absent, pulse from 112 to 120, and a peculiar expression of anxiety of countenance that could not be accounted for. From this symptom I conceived that bark was improper, that the disease was not ague, that something more serious was impending: my opinion was not received, the bark was continued, wine mixed with water was allowed, but the man did not amend. The rigours, it is true, were suspended, and so was the bark, but the skin remained dry and harsh, the pulse always quick, sometimes full, the anxiety constant, the body rather wasting, although the appetite was better than could be expected. In this state he was removed to the country, for the benefit of the air, the complaint being considered nervous, the abdomen indicating no signs of derangement on pressure, nor the chest on inspiration. I still predicted an explosion, which would develope the mischief, and gave a caution on the subject. This developement occurred suddenly, in the shape of a paralytic affection of one side, and examination after death showed the formation of an abscess on the opposite hemisphere of the brain. He would have been reckoned a rash and ignorant man, who would have advised the abstraction of blood from this patient at an early period of the complaint. I believe, reasoning from the result, there are none of us who would not have done it. A few ounces of blood from the jugular vein might have saved the life of a valuable man."* 50.

Here Mr. Guthrie very truly observes, that inflammation seldom

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"* Bleeding from the jugular vein is, in my opinion, much more effectual in all cases of internal derangement of the head, than from the temporal artery, or any other part. I believe it to be particularly so in cases which may be denominated chronic, or in low obscure inflammations or congestions. I have several people attending at my Infirmary for Diseases of the Eye, in whom the advantages of it have been most striking. In some cases of fits resembling epilepsy, it has put a stop to the disease. In epilepsy itself it has been useful, and in amaurosis from pressure on the brain, in congestion, and in impending paralysis, it has been of the most marked utility, when other general and local bleedings have failed."

runs so high and so rapid a course in foreigners, especially the natives of the warmer climates, as in our own countrymen—consequently the necessity for depletion is never *so* great in them, and hence their inert practice does pretty well with the subjects of it. The following extract, though long, cannot be abridged, and we do not like to pass it by unnoticed, as we consider it worthy of attention.

"Suppose two persons, of a middle age, residents in a confined part of London, addicted to full living, and what I consider as one of the marks of a very bad habit, corpulent, and of a sallowish complexion, and tinted with red vessels on the cheeks. Suppose that these persons as nearly resemble each other as possible, and that both are attacked (to carry on the argument) by inflammation of the peritonæum. In one, the symptoms shall be of enteritis, a *constant* hot burning pain at the region of the navel, increased by paroxysms, but never absent, augmented and rendered unbearable by pressure, constant motion of the body, which is never at ease, nausea and vomiting, anxiety of countenance, bowels confined, pulse quick, perhaps hard or uncertain or variable. In the other, the symptoms shall be of peritonitis; the pain less urgent, the general uneasiness and anxiety more moderate, the derangement of stomach not extending, or seldom amounting to vomiting; the pulse quick, the bowels may be either confined or open. In these cases we have acute inflammation in two persons, whose constitutions are equal to no continuance of exertion, not to say an increase of it; because an increase for a short period many of them can bear without detriment. Is it not of advantage to name these complaints differently, that we may not for a moment lose sight of the leading feature of the disease, the seat of it? Have we not a great advantage in having it constantly before us, that there is a difference in the mode of treatment? It is true we treat diseases according to symptoms, not according to the name we bestow upon them; but if there be an argument in favour of dis-

almost invariably dies. Whatever is to be done must be done quickly. The patient with enteritis must be bled to the greatest extent that he can bear with safety. I consider twenty ounces taken at once, to be more efficacious than thirty ounces drawn at three periods; the effect on the constitution will be more immediate, more productive of benefit, and less permanently injurious. In the first case, there will be only loss of blood to contend with, inducing debility; in the second, both loss of blood and the effects of protracted disease; which last is in such cases by far the greater evil, inasmuch as it is generally a fatal one, from the mischief done to some organ or organs of vital importance.

"The patient with peritonitis, although in danger, is yet less urgently so, than he who is labouring under enteritis. The quantity of blood drawn need not exceed ten ounces, and great reliance may be placed on purgatives, especially on calomel, with opium, and blisters to the abdomen—remedies which are alike of little use in well-marked enteritis, until the inflammatory symptoms have been relieved by blood-letting." 52.

When amputation is performed on habits of the above description, the great attack is on the nervous system, which is least capable of bearing it. The fever is first inflammatory, tending daily to typhus mitior, or nervosa, ultimately proving fatal, with every appearance, in many cases, of derangement of the biliary organs. At the first moment of injury, Mr. G. observes, the operation should be performed, so that the shock to the nervous system may be, if possible, continuous, and opium with purgatives should be administered to allay it. When the reaction rises permanently, then the surgeon requires resolution, and at the same time, discrimination, to keep it in check, without running into the opposite extreme of lowering too far the powers of life. By some of Mr. Hunter's adherents, cordials, stimulants, and opiates, are continued, instead of active purgatives and saline medicines. Blood-letting is generally admissible; it is urgently demanded, "when the pulse becomes quick, and in any degree full, and followed by an opiate it is frequently decisive." The quantity, in these cases, must be moderate—from twelve to sixteen ounces. In some cases blood-letting cannot be ventured on—in a very few instances cordials and opiates will be more proper throughout. Cold is here injurious as an external application—and if amputation be performed, the stump should be led to suppuration, if possible.

Mr. Guthrie is happy to corroborate the practice of immediate amputation (where the operation is necessary) by the opinions of Mr. Astley Cooper and Mr. James Wilson. We do not deem it necessary to enter into the question whether the citizens of London should be exempted from the rule of immediate amputation where necessary. We cannot imagine what claim they can have for such an exemption. That the sedentary citizen will not bear an operation so well as a healthy soldier or sailor, we can easily imagine; but we think it quite evident that neither will he so well bear the constitutional fever and irritation which must ensue, if secondary amputation be preferred.

In simple gunshot wounds, happening in sound constitutions, there is a strong tendency to run rapidly through the adhesive inflammation, and terminate in suppuration, unless gangrene should take place. The suppuration is generally in proportion to the inflammation, and our great object is to keep the inflammatory action in due bounds, so as to moderate the suppuration, and thus render the wound more disposed to heal. The idea entertained by some that the whole track of a gunshot wound must suppurate and throw off a slough of dead matter, is erroneous. Until the peninsular war poultices were commonly applied to facilitate the suppuration and separation, a principle of practice laid down by John Hunter. But in this celebrated war poultices were found inconvenient to the practitioner, and not beneficial to the patient—cold water was therefore adopted in their stead, "and in many cases, lint and sticking plaster without the assistance of either." After a fair investigation, then, and repeated trials, our author hesitates not to affirm that the cold water is the best application—the inflammation being, in some instances, materially prevented, in many, greatly controlled, and in almost all, very much subdued by it, whilst the suppurative process is not impeded in the generality of cases, in a degree sufficient to interrupt the subsequent one of granulation. In flesh wounds, then, a piece of lint dipped in oil or spread with ointment, is to be put on the part, and secured by two cross pieces of adhesive, over which a compress or some folds of linen are to be placed, and kept constantly wetted with cold water, or even ice, if agreeable to the feelings of the patient. A roller is of no use, except to prevent the compress from shifting its position during sleep. In other respects it is injurious, as preventing the parts from swelling, and thus causing irritation. Under this plan the first dressing is not to be removed for two, three, or four days. It should then be softened with warm water, or an evaporating poultice,* before removal. Mr. Guthrie has a most decided aversion to poultices in wounds of any kind. In spontaneous suppurations they are useful—but after injuries, injurious, as the object is not so much to promote suppuration as to restrain inflammation, and the succeeding suppuration. Cold water, he repeats, is the proper application to gunshot wounds in healthy constitutions. It is not, however, infallible, or always advantageous. There are many persons with whom it will disagree—and still more with whom it will disagree, after a certain time, in which cases, cold should not be persevered in. It does no good, in any stage of inflammation, when it produces disagreeable sensations in the patient. This generally takes place about the period of suppuration, and then fomentations are proper, with poultices, if convenient.

"In the spring of the year, the marsh-mallow makes an excellent

* "An evaporating poultice is made by crumbling some stale bread into a basin, and pouring boiling water upon it. The basin is then to be turned over on a plate, and the water allowed to drain off, when the poultice is ready for use." 61

poultice, and so do turnips, gourds, carrots, &c. independently of oatmeal, linseed meal, Indian meal, or other farinaceous substances. In all those cases where a poultice is resorted to, as much attention is to be paid to the period of removing, as of applying, it. It is used to alleviate pain, stiffness, swelling, the uneasiness arising from cold, and to encourage the commencing or interrupted action of the vessels towards the formation of matter; and as soon as the effect intended has been gained, the poultice should be abandoned, and recourse again had to cold water, with compress and bandage." 67.

These applications should not be too general, lest they cause the patient to take cold. The parts only which are injured, and their immediate vicinity, are to be wetted—the rest of the body being kept perfectly dry. It is seldom expedient to apply cold to the trunk of the body. If the wound be simple, it is unnecessary; if any viscus be affected or cavity opened, external applications are of very subordinate consideration. In injuries of the head, however, it is otherwise.

When the slough is thrown off, or the parts begin to granulate, a compress and bandage will complete the cure, generally within the first six weeks.

"A great number are always cured within the first four, and in these cases bleeding is never thought of. Purgatives are occasionally administered, and abstinence is an excellent remedy; but bleeding, purgatives, occasional emetics, and starvation, are remedies of great importance; if the patients be irregular in their personal habits, or the inflammatory symptoms run high." 68.

Here Mr. Guthrie gives a very correct delineation of the progress of a gunshot wound in healthy muscular parts, from the first day of infliction to the final cicatrization—a process scarcely requiring the interference of art, and producing but little constitutional disturbance. This favourable proceeding, however, is not to be expected in every instance. The state of constitution, the distresses of military warfare, exposure to the inclemency of the weather, or imprudence on the part of the patient, will frequently induce a train of untoward symptoms in wounds apparently of the same nature.

"After the first three days, the symptoms gradually increase, the swelling is much augmented, the redness spreads far from the edges of the wound, the pain becomes severe and constant. The wound remains dry, stiff, painful, with glistening edges. The sensibility is now much increased. The system sympathizes, the skin becomes hot and dry, the tongue loaded, the head aches, the patient is restless and uneasy, the pulse full and quick, there is fever of the inflammatory kind. The swelling of the part increases from the deposition of lymph and serum in the cellular membrane to a considerable extent above and below the wound, which is in a state of high inflammation; and, instead of being entirely superficial or confined to the immediate track of the ball, is spreading wide and deep in the muscular parts of the limb. The wound itself can

hardly bear to be touched, it discharges but little, and the sloughs separate slowly. If the inflammation be manageable, matter begins to be secreted copiously, not only in the track of the wound, but in the surrounding parts; sinuses form in the course of the muscles or under the fascia, considerable surgical treatment is necessary, and the cure is protracted from three to four and even six months, and is often attended for a longer period with lameness from contraction of the muscles or adhesions of the cellular membrane. The parts, from having been so long in a state of inflammation, are much weaker; and if the injury has been in the lower extremity, the leg and foot swell on any exertion, which cannot be performed without pain and inconvenience for a considerable time; the inflammation being readily brought on, and the weak parts forming the cicatrix giving way by ulceration, and forming again a very troublesome sore." 71.

The treatment, in these cases, is similar in kind, but more active in degree than in the others. The patient must be bled, vomited, purged, kept in the recumbent position, and local cold applications used as long as they are agreeable. When that ceases to be the case, fomentations are to be resorted to, and abandoned as soon as suppuration is established. Deep-seated inflammation requires leeches, but in much greater number than people are in the habit of applying in this country. The roller and graduated compress are the best means of cure in the subsequent stages, with change of air, and friction to the whole limb extremely actively employed.

When there is but one opening to a gunshot wound, it is incumbent on the surgeon to ascertain, if possible, where the ball or any foreign bodies may have lodged. This is not quite so necessary where there are two openings. It is not uncommon for pieces of shell or grape shot to lodge wholly unknown to the patient, and are only discovered at a subsequent period, when much time has been lost and misery endured.

The finger, which is the best probe, should be gently introduced in the course of the ball, to its utmost extent, the hand of the surgeon being, at the same time, carefully pressed upon the opposite side where the ball may be expected to lie. The limb during this examination should be thrown, as nearly as possible, into the position which it occupied at the receipt of the injury. Where the finger cannot reach, a metallic or firm elastic bougie, or long silver probe, may be used.

All surgeons know what discussion there has been respecting the extraction of balls. The older surgeons, though anxious to remove these missiles, did not resort to extensive or deep incisions for that purpose, depending more on dilating and extracting instruments—enlarging the wounds only when they could not effect their object without it. These forcible dilatations increased, of course, the sufferings of the patient, and rendered more severe the subsequent symptoms. Paré in France, and Wiseman in England, made incisions—the former large and deep ones. This practice was advocated in France, and opposed in England, about the year 1792, by Baron

Percy and John Hunter. The experience of the Peninsula proves that John Hunter's opinions were correct, as far as they relate to wounds in muscular parts; but they led to a dangerous error—"that of neglecting dilatation under circumstances in which it was absolutely necessary." The practice, during the Peninsular war was, never to dilate without a precise object in view, which might render an additional opening necessary. "This opening must always, consistently with this principle, have been carried through the facia of a limb, and was truly a dilatation, whilst those incisions which were formerly made through the skin, or indentations in the edges of the facia, were entirely abandoned." The necessity for dilatation, in short, must first be seen, when the operation follows of course.

"I know not a stronger instance exemplifying this, than that of a wounded artery, which all admit to be a fair case for dilatation. Suppose, then, that a man be brought for assistance with a wound through the thigh, in the immediate vicinity of the femoral artery, and which, he says, bled considerably at the moment of injury, but which had ceased; is the surgeon warranted in cutting down upon the artery and putting ligatures upon it on suspicion? I believe every man in his senses will answer, no; the surgeon ought to take the precaution of applying a tourniquet loosely on the limb, and of placing the man in a situation where he can receive constant attention in case of need; but he is not authorized to proceed to any operation unless another bleeding demonstrates the injury, and the necessity for relieving it. By the same reasoning, incisions are not to be made into the thigh on the speculation that they may be hereafter required." 53.

Mr. G. makes some acute remarks on Mr. John Bell's case of wounded arm, where the fascia was four times divided with great relief, but where the contraction of the arm and the spasmodic disease of the whole system always recurred as the fascia healed. Our readers know that by a random stroke of the knife the fascia was fairly cut across at the place where it is braced down by its connexion with the long tendon of the biceps muscle, and then only the patient was entirely released. Mr. Guthrie contends that this incision was only proper when the symptoms required it—and that it would have been bad surgery to have done it early, and by way of *preventing* the consequences which, in this instance, took place; because, says he, these consequences will *not generally* happen, and we must go by the general rule rather than the exception. Here our author very justly observes that—"the maxim which obtains with many surgeons that the effects will subside, if the original, or exciting cause, be removed, is erroneous;" and he aptly illustrates this error by the treatment in strangulated hernia in a state of high inflammation. Here we take off the stricture first by the knife; but if the surgeon, as is sometimes the case, thinks he has done enough by ordering a cathartic or an enema, he fails as a scientific practitioner. The part is in a state of high inflammation, and the removal of the stricture

upon it only takes off one cause of increasing inflammation, but does little towards removing that which already exists.

"In an early stage nature may be able to act for and relieve herself after the obstruction has been removed; but in a later one, when the inflammation is fairly established and running on towards gangrene, it is in the same state as any other common inflammation, and requires the same energetic mode of cure. When, then, I read, and have heard it said, that bleeding is of little or no use in strangulated hernia, of recent origin in young robust persons, or even in others, neither before nor after the operation, I am obliged to confess with regret, that surgery is never more degraded, than when it appears to be adorned with greatest splendour; that in no instance does surgery become so entirely an art as in this, where it especially deserves to be considered as a science. I have at this moment a preparation before me, in which the operation was successfully performed, but the patient was lost for want of medical treatment; and I firmly believe that the greater number of cases which are lost without mortification taking place, are lost from the same cause; but this is not peculiar to the operation for hernia. It was very common a few years ago, after all the great operations of amputation, and in many others of equally dangerous tendency." 88.

When inflammation, then, takes place in a wounded limb, general and local bleeding is to be used, cold or hot fomentations applied, purgatives are to be administered, with nauseating doses of antimony. If, on introducing the finger, the parts seem tense, and if the inflammation, pain, and fever run high, "an incision is to be made by introducing the knife into the wound, and cutting for the space of two, three, or four inches, according to circumstances, in the course of the muscles, and carefully avoiding any parts of importance." The same should be done at the exit opening, if mischief be impending; not so much for the purpose of loosening the fascia, as to abstract blood locally, and make a free opening for the evacuation of effused fluids. This our experienced author has done frequently with the most marked success.

In illustration of this principle we shall here introduce an interesting case from the *second edition* of Dr. Hennen's excellent work.

"A sergeant of dragoons was shot through the external part of the thigh at Waterloo, and was dressed for the first week by a Belgic surgeon. The lips of each orifice, which were plugged up with charpie, had been scarified in a radiated manner to about half an inch deep, as he said; but were nearly healed on my seeing him. Shortly after, heat, pain, and tumefaction took place in the limb, attended with considerable fever and great derangement of the head and stomach. This at last proceeded to such a degree, that the assistants requested me again to examine him, which I did on the 14th day. I found one orifice still open, and that some superficial scarifications had been repeated, and the limb fomented, but without effect; it was extremely tense, hot, and painful to the touch; it

could not be moved without great uneasiness; the lower part of the limb, from the knee down, was œdematous, while the thigh itself was swollen up to the external trochanter; interiorly it was less so, but rather puffy. I made a long and deep incision from the trochanter nearly down to the knee, completely through the fascia, and about the centre of the limb I dipped almost to the bone. So far from this occasioning pain, the man begged me to go on; and, although there was but a very slight discharge of matter from the wound, he felt easier within an hour. The bleeding from the part was encouraged by warm fomentations; and in five days the sergeant was able to walk about, and was soon after discharged convalescent." *Hennen's Military Surgery, p.* 70.

The knife, Dr. Hennen remarks, is often indispensable in our search after balls, splinters, and bleeding vessels. "It is also useful in relieving the strictured state of the parts tied down by fasciæ, when that stricture is forming or formed;" but neither does the stricture form in all cases, nor does early scarification prevent it, because the tumefaction depending upon violence of injury, locality, and circumstances of constitution and treatment, the scarified parts may, and often do, heal before the occurrence of the contingency for which it has been employed.*

Our continental brethren appear still to adhere to the principle of scarifying wounds, by way of preventing inflammation, especially when they are situated in tendinous and ligamentous structure, as the following extract from Messieurs Laurent and Percy will show.

"Toutes les parties du corps recouvertes d'une aponévrose dense et serrée, telles que celles qui se trouvent à la région postérieure du cou et de la colonne rachidienne, l'épaule, l'avant bras, la paume de la main, la partie supérieure externe de la cuisse, la jambe et la plante du pied doivent être incisées. Le chirurgien se servira à cet effet d'un bistouri boutonné, qu'il conduira sur son doigt indicateur préalablement introduit dans le trajet de la balle, ou sur une sonde cannelée, si celui-ci se trouvait trop étroit pour admettre un doigt. Il incisera de dedans en dehors tout le trajet de la balle, et il coupera l'aponévrose dans une étendue beaucoup plus considérable que les parties soujacentes, en se conformant au précepte donné par Ambroise Paré de la scarifier dans tous les sens, afin de prevenir la hernie des muscles; l'anatomie guidera son doigt dans ce travail en sous œuvre, et l'empêchera de léser des vaisseaux et des nerfs qu'il est si important de respecter. Une partie qui ne serait pas recouverte d'aponévrose, mais dans laquelle on soupconnerait qu'un corps étranger, qu'on ne pourrait extraire sur le champ, parce qu'il aurait perdu ses rapports avec l'ouverture extérieure, serait également incisée, afin de laisser un libre cours à la suppuration qui finit le plus souvent par

* Dr. Hennen observes in a note that these observations are confirmed by the experience of the venerable Dr. Jackson, who published similar opinions so long ago as the year 1790.

dégager la balle, et la ramène à la portée des instrumens destinés à en opérer l'extraction." *Dict. des Sciences Med. tom.* 43, *p.* 64.

Mr. Guthrie observes that the practice of dilatation is often highly serviceable in the subsequent stages of gunshot wounds where sinuses form, and are tardy in healing. A free incision is also useful when parts are unhealthy, although there may not be any considerable sinus. The necessity of free incisions, where the bones are broken, need not be insisted on.

A punctured wound extending to a considerable depth labours under great disadvantages, and generally in proportion to the smallness of the instrument, and the difference of texture through which it passes.

"As a punctured wound cannot be changed into an incised one by incision, and the object of it, which would be union by the first intention, cannot be effected, an incision, in the first instance, may do harm, and will often be unnecessary; for many bayonet wounds through muscular parts heal with little trouble, and it is time enough to act when assistance seems to be required. Cold water should be used at first; care should be taken not to apply a roller or compress of any kind over the wound, and the matter should be frequently pressed out. When suppuration is established a roller should be applied above and below the wound, and an evaporating poultice upon it, if cold be found uncomfortable." 91.

Although some fortunate instances occur of balls lodging in bones without fracturing them, or producing much inconvenience, yet these exceptions are sadly counterbalanced by the results of other analogous instances.

"If a ball lodge in the head of a bone, and is not removed, it generally causes caries of the bone, disease of the joint, amputation, or death. If in the shaft of a long bone, necrosis for the most part follows, with months and years of misery. On a flat bone, caries is equally the result, and if it be surrounded by large muscles, sinuses form in various directions, contractions of the limb take place, and the patient drags on for years careless of life and ready to submit to any thing to obtain relief." 91.

Mr. Guthrie considers it a good general rule that balls should never be allowed to remain in bones. But there is often great difficulty in extracting them. Here Mr. Guthrie relates the fortunate case of Lieutenant Colonel Dumaresq, who was wounded in the battle of Waterloo by a musket ball, which passed through the scapula, penetrated and was lost in the chest. The thoracic inflammation was almost ungovernable, and he barely escaped with his life. A swelling was then discovered in the axilla, and was ascertained to be the ball, lodged in the rib, and is still there with a quantity of bone matter around it, while the Colonel enjoys good health. Where balls are discovered on the opposite sides of limbs, and at an inch or so distant from the surface, it has been recommended to allow them

to remain, rather than to extract them immediately. But Mr. Guthrie has cut out great numbers of them, under these circumstances, and never found any inconvenience ensue :—on the contrary, the minds of the patients were relieved, and an opening was obtained for the evacuation of any matter formed in the long track of the ball. On the other hand, we are not to cut two, three, or four inches into the opposite side of the limb, for a ball which cannot be distinctly felt through the integuments or soft parts.

Mr. Guthrie here draws the attention of the surgical profession to a rare and suddenly fatal termination of gunshot wounds, of which he has only seen a few cases. We shall introduce one as a specimen.

"On the retreat of the army from Fuente Guinaldo in 1812, a smart affair took place at the convent of Saca Farte, between the advance of the French, and the cavalry and the fourth division of the British army under Sir L. Cole, to which I belonged. The wounded accompanied me to Sabugal, on the heights near which we offered battle. Among them was a man, a stout handsome soldier, who had been shot through the right thigh, the ball entering below the femoral artery, passing through and outwards close to the bone, this wound went on remarkably well for near a fortnight, so much so that the man had actually got up and walked about. I saw him at one o'clock, and, as he was standing, desired him to keep himself quiet; he answered, he felt quite well. In the evening, Mr. Mahoney, now surgeon of the Fusiliers, who occupied the same quarters with me, reported that the man was suffering some pain, and that he had ordered him an opiate and a poultice. He died early in the morning, having complained a good deal in the night, but not sufficiently to induce the orderlies to call Mr. Mahoney, until symptoms of approaching death alarmed them. I examined the limb carefully within twenty-four hours of the man's being in comparative health. On the day previous to his death, the wound looked favourably, there was little or no inflammation, the limb was soft, and he was capable of walking, and conceived himself comparatively well. Inflammation came on in the night, internally, deep, and hardly affecting the skin with redness: on dissection the thigh appeared swelled, although not particularly so, but on cutting deeply through the fascia in the course of the wound, the whole thigh seemed so stuffed, or gorged with blood, that the texture of the parts, muscular as well as cellular, was soft, and readily giving way to a moderate pressure of the fingers; I can only compare it to the appearance of a part just falling into a state of gangrene." 99.

To check so rapid and dangerous an affection as this, Mr. Guthrie thinks that leeches should be applied in great numbers, after an incision has been made into the part. General depletion is then to be resorted to, "and one effectual bleeding, so as to cause syncope, will be most serviceable."

Hitherto Mr. Guthrie has only considered the treatment as applicable to healthy inflammation, in the treatment of which we act de-

cidedly to command, as it were, success. In bad habits we are forced to act as circumstances may require. The phlegmonous and erysipelatous inflammations may be considered as two extremes of a scale, admitting between them many modifications—the erysipelas itself being greatly modified by habit of body, season of the year, climate, and prevailing epidemic diseases. It is therefore impossible to lay down any fixed rule of practice in this disease. When the constitution is good, and the fever inflammatory, Mr. Guthrie uses cold applications with advantage—especially the liquor ammoniæ acetatis, diluted with water, or with the addition of a little spirit. But when the constitution of the patient is bad, or the fever of a typhoid nature, Mr. G. has found warm fomentations of poppy heads, &c. with a small quantity of spirit, the best and most comfortable application. Erysipelatous inflammation is by no means common in gunshot wounds, because these injuries are generally inflicted on healthy subjects. But that species of the disease termed *erysipelas phlegmonodes*, in which the inflammation extends to the cellular membrane, forming abscesses with little adhesive inflammation around them, so that the fluid secreted is diffused through the part, "giving to the finger the sensation of a partially circumscribed swelling"—such kind of erysipelatous inflammation is certainly of very frequent occurrence—indeed is present more or less in every case of gunshot wound, not ending in mortification, and where the inflammation extends deeper than the skin. Mr. Guthrie has no experience of the free incisions formerly recommended by Mr. Copland Hutchison, while surgeon of the Royal Hospital at Deal. We can confirm the truth and justice of Mr. Hutchison's remarks on this point by personal experience. We fully coincide with Mr. Guthrie in the following sentiment:—

"In all cases of gunshot wounds, in which erysipelas supervenes, the treatment is to be regulated by the symptoms, and I believe the same principles ought to be applied to it in every circumstance or situation of life in which it may be met with." 109.

Mr. Guthrie here notices a most dangerous and insidious inflammation, sometimes, though very rarely, (perhaps not more than two or three cases in an hospital of a thousand men) accompanying gunshot wounds. It occurs after the 10th day, and in the five or six cases which came under our author's notice, the wounds were in the upper extremities. The wound, after the 10th day, swells and becomes painful—the redness is of a pale colour, more resembling phlegmonous than erysipelatous inflammation, whilst the skin has a shining glossy appearance, the tumefied parts being slightly œdematous to the finger, which, to a certain extent, is resisted by the firmness of the parts below. The pain is not greater than in other inflammations, and is rather burning than throbbing. The constitution sympathizes, at first, only in a moderate degree.—The swelling and shining appearance extend up to the axilla. The patient can sit up, or even walk, and neither countenance nor pulse indicates the near approach of dissolution, which, in five cases, took

place a few hours after the last visit, when the appearances were as above described. All that could be learnt was, that they got worse in the night—that is, the pain increased, with difficulty of breathing, ending quickly in death. The three first cases were not examined. In the fourth, Mr. Guthrie could discover nothing beyond inflammation of the veins, especially those leading to the axilla, the axillary vein itself being inflamed. To this the death was attributed at the time, as it is not an unusual occurrence in fatal cases after amputation. In the fifth case, the man died of effusion into the chest, on the injured side. In this the veins were not affected, as in the other case. In the sixth case, the danger was immediately apprehended.

"The man was bled, purged, vomited, and diaphoretic remedies were administered, composed of calomel, antimony, and principally opium. Poultices were applied to the wound, and cold applications to the remainder of the limb. The arm swelled nearly up to the axilla, and I fully expected it would have taken the same course as the others, but it did not do so; the inflammation gradually subsided, the arm diminished, and reassumed its usual appearance; the exact time I cannot mention, having lost the particulars of the case. During this process the man's health declined, he suffered an attack of fever, became afterward jaundiced, and died under symptoms of diseased liver. There was nothing wrong at his death about the arm which had been inflamed." 111.

Mr. Guthrie hazards a conjecture that effusion in the chest was the cause of death in all the five cases. As it is only conjecture there can be no harm in our offering one too. We think it highly probable that there was inflammation of the internal tunics of the arteries in the majority of the cases. The state of these vessels is not mentioned in either of the two dissections.

The last result of inflammation in gunshot wounds which Mr. G. takes notice of, is mortification. There is some confusion of ideas among authors respecting mortification, sphacelus, and gangrene. Our author seems to make the chief distinctions bear on constitutional and local states of the disease. It may take place from excess of inflammation, arising spontaneously, or from external violence. Gangrenous inflammation always shows a weakness of part, whilst it may not demonstrate any of the constitution;—"in which case the gangrene ceases with the destruction of the weakened part, and the separation between the dead and the living is duly effected." The efforts of Nature, when gangrene takes place from excess of inflammation in sound constitutions, are too strong for the powers of the part weakened by disease.

"We accordingly endeavour to moderate them in the first instance by venesection, cathartics, and diaphoretics, and to allay irritation in the part by the appropriate remedies. When mortification has, however, taken place, we find that the constitution becomes immediately sensible of it, not by means of the absorbents taking up

the gangrenous particles, as Baron Larrey supposes, but through the nervous and sanguiferous systems, which have been principally implicated in the disease, and have been entirely the instruments by which nature has attempted to effect its suppression. The pulse sinks, the countenance becomes anxious, the shock which has been sustained is perceptible, and the surgeon now endeavours to revive the drooping efforts of nature, which has been vanquished in the struggle. If the powers of the constitution have been fundamentally good, nature is able once more to rally, and although the part is completely irrecoverable, still she is capable of surrounding it, as it were, with a line of circumvallation, preventing the further encroachments of the disease, until, by renovated efforts of a slower but surer nature, she is able to cast it off altogether. But if the powers of the constitution have been bad, it is precisely the reverse, nature seems to have completely exhausted her strength in the struggle, and to be totally unequal to further resistance." 115.

The pulse sinks, pain ceases, the skin becomes cold, perspirations break out, the countenance is inexpressibly anxious, and death soon closes the scene. Amputation of a member, in such circumstances, is forbidden, and our author thinks wisely so, by all modern surgeons, since the operation of amputation is an injury which the powers of the constitution are incapable of bearing. Inflammation in the stump scarcely commences before it ceases in the death of the part.

"If the operation should have been performed on a person of better constitution and powers, the stump may go on well for a day or two, and then actual gangrenous inflammation supervenes, as in persons of deficient powers, which will be followed by death. The axiom in surgery is then a good one, 'that whenever the constitution of the patient is implicated, whenever the powers of nature are considerably exhausted, the operation of amputation should not be resorted to until the line of separation is fairly established.' Amputation in this state is performed only when a part of a limb is completely destroyed, it is done to shorten and relieve the operations of nature, and to render the remaining portion of it more serviceable, or useful to the patient. It is consonant to reason that this injury, which is intended to be a beneficial one in its result, should only be committed, when nature has so far recovered from the preceding struggle, as to be able to set up and support the new actions required of her; and the appearance of the line of separation is a fair proof of her capability to do so." 117.

Mr. Guthrie takes up pretty extensively the subject of traumatic gangrene. Most of our surgical readers are aware that Baron Larrey advocates the practice of amputation in these cases, before the line of separation is formed—that is, as soon as the death of the part, and the consequent loss of the limb is demonstrated. "The supervention of gangrene on the stump," says the Baron, "is not to be feared as in spontaneous gangrene, in which the line of separation is

not established, because traumatic gangrene is only propagated by absorption, and an affection of the different textures, which swell in consequence of the continuity of vessels along which the disease successively passes. In fact, amputation done at the proper place arrests its progress and prevents a fatal termination of the disease. The efforts of nature are to be seconded by bark, wine, tonics, &c." The Baron supports his opinions by several successful cases of amputation, in which the gangrene was spreading when the operation was performed. Mr. Guthrie shows clearly enough that the ingenious Baron's *theory* is quite defective, and the results of his practice he accounts for on very different principles. A cannon ball, Mr. Guthrie observes, in striking a limb, destroys the life of the part, more or less, according to the extent of the injury. Thus if a blow be received on the middle of the leg, the bone be broken, the arteries divided, or rendered incapable of carrying on the circulation, mortification takes place in the foot, because it is deprived of its usual support.

"It is possible, however, that this may not follow immediately, as it may not be entirely deprived of blood, which passes into it in small quantity from the parts above, connecting it with the rest of the extremity. The parts immediately above those actually struck by the ball have received a very considerable shock, and their sensibility is much impaired; and, when any action takes place in them, they will sometimes be found unequal to sustain it, and, as the action attempted to be set up is inflammation, the failure of support causes it to fall into gangrene. It is, however, a failure of support, not from want of power in the constitution, exhausted by a serious struggle, but from incapability of the parts to maintain it. The extent to which this debility of parts may extend is uncertain, and the limits to the mortification must be so likewise, if left entirely to nature, it is evidently a struggle on the part of the constitution to reanimate the drooping powers of the part, which are unable to bear the assistance attempted to be afforded them. Inflammation then precedes the mortification, the limb swells, and has every appearance, above the wound, as the disease advances, of humid gangrene. It began as a local disease, the part being simply unable to live, and nature, having received a shock, as I conceive, entirely through the nervous system, and not by the absorbents, endeavours by means of an additional supply of blood (as she invariably does in every case of injury,) to recover the parts in jeopardy, to renovate their strength. If the parts are capable of bearing this, healthy inflammation is established and the mortification ceases. The disease is, from the moment inflammation is *established*, no longer local, the constitution is beginning to be implicated; and, if the struggle be continued, it becomes a case of mortification, dependent, according to my principles, on constitutional causes. Nature seems to suffer in the deprivation of the principle of life whenever she becomes sensible of the death of any part of the body, and in a greater proportion than would seem to be commensurate with the supply of that part in a

state of health; she becomes weakened, of course, more by the death of a part than by its amputation, and upon a principle connected with life, which we cannot explain. When the inflammation commences, the great point for observation is, whether the power of the part can or cannot maintain and carry it on to the healthy, adhesive, and ulcerative stages. If nature can accomplish this, she ought not to be interfered with; but if it appear that the part is incapable of supporting the efforts of nature, or, what is worse, that she is incapable of making them; is she to be allowed to exhaust herself in a fruitless struggle, or is assistance to be given, the instant the inability of the part is seen, and just as the powers of nature are displaying themselves? I have no hesitation in saying, that the disease is yet a local one, nature is only showing what she will do if properly seconded; and that, if her efforts are directed to sound parts, capable of sustaining them, she will be able to make a sufficient and successful struggle. Amputation, then, is to be performed in sound parts, to which the usual efforts of nature will be directed; and, if they be unbroken, or only impaired by the previous injury, the result will be fortunate; but the inflammation will not be sufficiently powerful to be able to stop at the adhesive stage, union will not take place to any extent in the stump; suppuration should therefore be encouraged as a natural consequence, and no more adhesive straps should be applied than may be sufficient to keep the parts together, so as to prevent retraction. Warm fomentations and poultices should be preferred to cold applications, and the ligatures should all be cut short." 124.

Dr. Hennen, in his very valuable work, makes many sensible remarks on this point. He shows that so far back as 1782, Mr. Curtis, a naval surgeon, advocated the practice, since brought into notice by Baron Larrey and others, of amputating in traumatic gangrene

marks on various causes and states of gangrene, particularly from injuries of the large vessels and nerves, from cold, from pressure, &c. but must refer to the work itself.

"Having endeavoured to establish the principles on which mortification is supposed to depend, it will be unnecessary to enter in detail into the treatment. In all cases, except in excess of inflammation, the internal means should be to sooth and support the system. Bark I have not found useful, further than as a tonic, and given in such quantities as not to overload the stomach. Camphor, the carbonate of ammonia, opium, wine, brandy, I conceive to be better remedies. As topical applications, emollient and fermenting poultices are decidedly the best, alternating with mild spirituous fomentations. I have always seen scarifications do harm, when they approached or interfered with living parts, and stimulant applications are only admissible, on the common principles of surgery, as applicable to parts in a state of ulceration. Any thing, however, which keeps them clean, and tends to remove or destroy the fœtor from those which are dead, is beneficial." 148.

This section of Mr. Guthrie's work closes with official tabular and narrative reports, showing the effects of a battle, and the relative mortality in different classes of wounds. In the first ten weeks after the battle of Toulouse, one-eighth of the whole wounded died, and one-eighth more might be considered as dying afterward, or as unfit for service; "the permanent loss, after a battle, to the effective strength, varying from one-fourth to one-third of the whole number wounded. Of 1359 cases treated, including officers, only one artery required a ligature, the other cases of secondary hæmorrhage having occurred as complications of compound fracture, rendering amputation necessary."

The second section or division of our author's work is on gunshot wounds accompanied by lesion of the larger nerves. It has fallen to the lot of our author to see a great many wounds of this description—many of them productive of the greatest sufferings for years together. Physiologists are all aware, that if a large nerve be injured, the pain or inconvenience is not felt at the place of injury, but in the part to which the ramifications of the nerve are distributed. If it be completely divided, total loss of sensation and motion is the consequence—if only injured, the effect is pain in the part supplied by the nerve—which part has a greater susceptibility for stimuli than natural, with diminished capability of bearing them, partial loss of sensation, and still more of motion. The part of the nerve actually injured offers little or no impediment to the healing of the wound, which is generally effected in the usual time. The consequences which follow may be local or general; and are frequently of the most distressing nature. When a great nerve is divided, the extremity loses motion and sensation; yet the circulation appears to go on uninterruptedly, the size of the vessels, however, somewhat decreasing. The limb shrinks, the animal heat is reduced, and the power of resisting changes of temperature is nearly annihilated. The

circulation in the capillary vessels is easily obstructed—the process of inflammation is not carried on in the same way as in health—it more rapidly passes over the adhesive stage and runs on to the ulcerative; but is not prone to pass into the gangrenous state, as in paralysis from internal causes. The absorbent system also seems, like the sanguiferous, in some measure independent of the nerves going to the part, its functions being carried on pretty regularly.

"An officer received two balls at the battle of Salamanca; one passed through the knee-joint, the other through the upper part of the chest, near the shoulder, but underneath the clavicle, dividing, as was supposed, the nerves going to the left arm, which was immediately deprived of the powers of sensation and motion. Suppuration occurred in the knee-joint, inflammation had taken place in the chest, he had a very troublesome cough, hectic fever had supervened, and this gentleman seemed to be almost without hope, when my opinion was requested. It appeared to me, after careful examination, although the lung of the left side had been affected by continuity of inflammation, and was still suffering from its consequences, that the hectic fever had principally been caused by the disease of the knee-joint, the amputation of which offered the only chance of relief. This appeared to be, and was, a very strong measure; but no intermediate one could be resorted to with any hope of success; and, after having the true state of the case made known to him, the patient decided that he would have his leg removed above the knee. The operation was done, and succeeded. He slowly recovered, and the wounds healed, but the arm remained in the state I have described. Eight years have elapsed, and he is now grown stout, is in excellent health, but the arm remains nearly the same. He has within the last two years perceived some sensation in the course of the muscular or spiral nerve. He has also been indicted for a rape; but the magistrates, very properly, however they might admit the attempt, would not consent to the admission of the fact." 159.

Here Mr. Guthrie relates some cases illustrative of the foregoing principles, and refers to others, particularly to those published by Dr. Denmark and Dr. Hennen. The latter gentleman has made many interesting remarks on this class of lesions; some of which we shall here notice. Dr. Hennen considers the mechanical injuries of nerves as, for the most part, entirely beyond the power of art to relieve effectually.

"A very common and most distressing set of sensations are the shooting pains and sympathetic feelings, referred by the patient to the fingers or toes of an amputated limb, which in some persons exist for months, or even years, after the operation. In some, cold or damp weather, lightning, or an electric state of the atmosphere, or an easterly wind, will produce it; in others, mental agitation, violent bodily exertion, intense thought, or excesses, particularly in venery, are sure to bring it on. In some instances it can be traced to no obvious source, in others it very clearly depends upon mechanical irritation." 191.

The 83d case in Dr. Hennen's treatise, of a general officer, is very interesting; but as it was stated in the first edition of this meritorious officer's work, it is pretty generally known to the profession.

"Œdema," says Dr. Hennen, "is a very frequent consequence of gunshot injuries of the extremities, and is generally complicated with pressure of the lymphatics, or injury to the nerves, either immediately, or from the tumefaction of the parts from inflammation. By the use of gentle friction, with moderately stimulant embrocations, succeeded by the local shower-bath, and the subsequent application of a firm flannel roller, this troublesome symptom will be in general benefited after some time. I have also derived essential relief from the distressing numbness of the fingers in such cases, by the frequent evaporation of sulphuric æther upon the part. I have never noticed injuries of the lymphatic vessels themselves, unconnected with general affections of the limb." 196.

When a nerve happens to be included in a ligature, the latter is long in coming away, and is frequently broken off close to the knot, leaving the noose behind, and causing great misery to the patient. In Dr. Hennen's case (that of Sir George Cooke) the first attempt at clearing the ligatures was attended with excruciating pain, not referred to the stump itself, but to the finger, thumb, wrist, elbow, or even external skin of the lost arm, as one or other ligatures might be handled.

"Once only," says Dr. Hennen, did I ever know him refer his pain to the seat of the sensorium itself. On that occasion, from using an artery forceps to the ligatures, on which the slide moved rather stiffly, I exerted a greater force than I had intended. He convulsively put his hand to his head, expressed a sense of exquisite pain in his brain, involuntary tears dropped from his eyes, a paralytic contraction momentarily affected his mouth, a universal paleness spread over the uncovered parts of his body; and, although unusually tolerant of pain, and of a most remarkable equanimity of temper, he uttered a piercing cry, and exclaimed, 'that the agony in his head and neck was insufferable.' The state of collapse was so great that I was obliged to send an aid-de-camp instantly for volatile alkali, and a glass of Madeira, by which he was soon relieved; but the painful sensation, and the prostration of his strength, continued through the day. A British Admiral was present on this and various other occasions, and observed to me, after I had confessed my inability to explain, even to my own satisfaction, the cause of all these sensations, "that he never saw the General dressed without applying mentally to the wonderful sympathy manifested on those occasions, the expression of Pope, 'it lives along the line.' I believe we must be content with the fact, without seeking for the explanation." *Hennen, p.* 192, *2d Edition.*

Full a year elapsed before the last ligature came away. The General's health did not suffer, and no incisions or violent means were used. To account for the difficulty of detaching ligatures from

nerves, we must recollect that the changes which take place in the extremities of these last, in a stump, are the reverse of those which occur in the sanguiferous vessels or bone itself. In a nerve the cut extremity swells, assumes a bulbous and oval form, becomes firmer in its structure, and permanently increased in size. It is evident that a ligature on such a part as this can never be detached till it becomes decomposed. Dr. Hennen remarks that;—"an experiment of placing a ligature on the axillary plexus, or any single nerve in the dead subject, will show what an obstinate resistance is offered, *after the protrusion of the medullary substance*, by the subsequent puckering of the tough investing membrane which, during life, will not admit of the ligature sliding off, either until the part is absorbed in course of time, or the material of which the ligature is composed undergo some decomposition." 194.

Nerves, when wounded, often cause very distressing sensations, which cannot always be traced to the immediate seat of injury, in consequence of the local and general derangements produced by the wonderful sympathy and communication between all parts of the nervous system.*

Here Mr. Guthrie relates the case of a cavalry officer who received a wound from a musket ball in the back part of the right thigh, near the trochanter major, which lodged, but apparently without injuring the great sciatic nerve. The wound healed, but the limb remained weak, and liable, occasionally, to intolerable pain, yet without any privation of sense or motion. This pain was felt principally in the sole of the foot, and outside of the leg, in the direction of the fibular nerve. Cramps, as the patient terms them, are frequently attacking him, by day and by night, especially on any change of weather, or any irregularity in living. If in bed, he is obliged to jump out, and put his foot on a cold stone, which affords him momentary relief.

We cannot follow Mr. Guthrie through the remaining observations on neuralgic affections arising from injuries or spontaneously, especially as most of them are taken from works well diffused among the profession. We must also pass over, at least for the present, a great part of Mr. Guthrie's work now reprinted and improved, in order to give some account of a particular section dedicated to the subject of amputation at the hip-joint. Before entering on this subject, however, we shall glance cursorily at one or two points in surgery, which we have neglected to notice in their places.

At page 247, *et seq.* Mr. Guthrie discusses a very interesting point in surgical pathology—namely, those determinations to, or irritations in, particular viscera after operations.

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* Stumps are frequently subject to severe spasmodic affections, which extend towards the trunk in the course of the nerves, and are often productive of great alarm. I know one gentleman who suffers very frequently from them, and as I conceive from two causes, exposure to cold, or derangement of the digestive organs; and he obtains relief from the use of purgatives, and the application of leeches and warm fomentations to the part, followed by the use of stimulants and narcotics. 170

"When the inflammation attacks the lungs, the approaches of it are very insidious, the soldier does not suffer sufficient to make him apply for particular assistance, as he labours under fever; and when the disease has advanced to that point that the attention is especially drawn to it, the time for assistance is past, and the disease shortly proves fatal; in some instances apparently by suffocation. The lungs on dissection are found full of blood, and firmer than usual, occasionally pus is formed in them, or there is effusion into the air-cells, and into the cavity of the chest." 248.

Mr. Guthrie considers that these accidents are much more prone to occur after secondary than primary amputations—another reason for preferring the latter. Our author complains that although these observations were published in 1815, Mr. Charles Bell, in 1817, states that the point in question is "one of the many subjects authors have neglected to treat of." We are sure Mr. Bell would not wilfully withhold any priority of claim that might be fairly due to a cotemporary practitioner. We are the more inclined to this belief as we observe that this eminent teacher has ceased to deliver certain doctrines respecting the great difficulty of compressing arteries, so as to effectually restrain the flow of blood from them, long maintained by his illustrious brother, himself, and we believe most other surgeons in civil life. It is unquestionably by our army and navy practitioners that the following erroneous position of Mr. John Bell has been refuted.

"He says, page 415 of his Principles of Surgery, 'I will repeat with confidence what I have frequently affirmed, that it is one thing to suppress the pulse in the lower part of the limb, and another thing to stop the pulse in the great artery. I have tried in great operations, near the trunk of the body, to stop the blood by pressure; but though I could suppress the pulse of the femoral artery with my fore-finger, I could not command its blood with the whole strength of my body."

Contrary to this, we can confirm, by numerous observations, the following statement of Mr. Guthrie:—

"I have no hesitation in declaring, and I am supported in the assertion by all the surgeons of extensive practice in the British army, that when the pulse is suppressed in a great artery, the flow of blood is completely restrained for every purpose in surgery. I will even say, that the flow of blood may be entirely suppressed, and yet the pressure upon the subclavian artery above the clavicle, shall be so moderate, that the instrument will not leave a mark upon the skin discoverable after twenty-four hours. I do not assert this without solid foundation, for I have seen the inguinal and subclavian arteries compressed and divided very many times, and I have had the femoral and axillary arteries as often between my fingers; but, I never saw blood projected one inch from the orifice of these vessels without a pulsatory motion being evident." 343.

Mr. Guthrie does not doubt the correctness of Mr. Bell's state

ments, when he mentions his inability to suppress the circulation in the *cases of aneurism*. He means to assert only "that the passage of blood through a healthy artery can be effectually prevented by moderate pressure; and that when the pulse has ceased in a large artery, the surgeon may divest himself of all fear of hæmorrhage." This fact is now familiarly known throughout our army and navy medical brethren.

It was our intention to have noticed the important subject of *excision of the head of the humerus*, so ably discussed in Mr. Guthrie's work; but as the observations of Mr. Bell and those of Mr. Guthrie are now fairly before the public, we leave that public to decide between these able surgeons. We have not space to state the question in a full and proper manner, and without such a step—

Non nostrum inter illos tantas componere lites.

Amputation at the Hip-Joint. This formidable operation has been seldom performed, surgeons having agreed to apply to it the epithets dreadful and horrible, and consider it as hopeless—nay, as an unnecessary cruelty. "Fear," says our author, "has so much pervaded the minds of all (surgeons in civil life) that it is generally regarded in domestic surgery with as much horror, as the attempt at putting a ligature on the external iliac artery would have been a century ago, if such an operation had been proposed." The opinions of military surgeons, supported by stubborn facts, are dispersing these prejudices; and few surgeons of any pretensions to eminence would now hesitate to perform the operation in question, under proper circumstances. Pott *saw* it performed in London, but appears to have formed a resolution never to perform it himself—unless on a dead body. Without doubt it is a formidable operation; but, when there is no other chance for life, we must apply the precept of Celsus:—"Nihil interest an satis tutum sit præsidium, quod *unicum* est." It appears that M. La Croix, in the year 1748, completed an operation of this kind, which Nature had nearly effected. A boy, thirteen or fourteen years of age, was brought into the Hotel Dieu with gangrene spreading up both thighs. A line of separation, however, formed around the right hip-joint, and the limb was nearly detached by the efforts of Nature. M. Le Croix completed the detachment with a pair of scissors, and the boy was so well on the fourth day, that the surgeon proposed to amputate the other limb, there being sufficient space left for that purpose. This was performed, and the boy was doing well, but being seized with fever, he died fifteen days after the operation.

Dr. Kerr of Northampton published a case of this kind in 1779. A girl had a large abscess near the great trochanter, with disease of the joint, and hectic fever. He amputated at the joint, but found the acetabulum carious, as well as a portion of the os innominatum. She died hectic on the 18th day after the operation.

Baron Larrey has performed amputation at the hip-joint seven times. In the first case there was every appearance of a favourable result, but a rapid march of twenty-four hours' duration marred their

hopes, and probably caused the death of the patient. The second case was Mons. Bonhomme, wounded by a splinter of a shell at the siege of St. Jean D'Acre.

"The muscles were either torn or carried away from a great part of the circumference of the thigh, the femoral artery was torn about five or six fingers' breadth below the crural arch, and the femur was broken as high as the great trochanter. He had lost a considerable quantity of blood, and was very much weakened. I even thought he would die in a few minutes, if the removal of the thigh was not immediately accomplished. He passed the day and night after the operation in as quiet a state as could be desired. I gave him some antispasmodic draughts, some cooling drinks, and weak broth with a little wine. The next morning the dressings were wet with a reddish-coloured serous discharge, without swelling, pain, or tension in the stump. He was easy during the night, and slept well for three hours. The third day the dressings were removed, and he passed the day very well; the bowels were regular, and he had a desire to eat. I gave him some rice gruel (pottage) night and morning. On the night of the third to the fourth day, he had some slight febrile symptoms accompanied by throbbing in the stump, and general heat of the body, which was succeeded by a plentiful perspiration, ease, and sleep. In the morning I found the dressings soaked with a purulent discharge. The flaps had already united the half of their extent, leaving at their upper and under extremities an opening about two inches long, where I had brought out the ligatures. On the fifth day every thing appeared to be going on as well as possible. The matter discharged from the upper and lower openings was of good quality and quantity. On the sixth day his situation was still very favourable, and I had every reason to expect a cure; but the crowded state of our hospital, and the impossibility of separating even the most severe cases of wounded from the other sick, were the cause of an unfortunate occurrence the next night, which the particular nature of our situation did not enable me to guard against." 305.

This accident was the introduction of plague into the hospital, of which the unfortunate officer died.

The 3d case was a drummer who had his thigh carried away by a splinter of a shell, and who was operated on immediately by the Baron. The return of the army to Egypt took place, and this young lad died on the journey. The Baron performed it twice unsuccessfully after the battle of Wagram. In the Russian campaign he also performed it twice. In the first of these the patient lived till the 29th day, when he was carried off by dysentery.

The second took place after the battle of Mojaisk, and the man recovered, but never having reached France, there is some doubt on the subject. M. Baffos, a Parisian hospital surgeon, performed this operation on a boy of seven years of age, on the 3d January, 1812, in the presence of several surgeons.

"'M. Danyau, standing on the left side of the patient, com-

pressed the artery with the thumb of the right hand. Holding the thigh with my left hand, I moved it gently backwards and forwards to enable me to observe the spot nearest to the joint where the knife ought to enter; which having ascertained, I plunged a sharp-pointed straight knife, eight inches long, and six or seven lines broad, into the anterior and superior part of the thigh, external to the artery, and brought it out directly opposite behind. I then cut along the bone for the breadth of four fingers, when, turning my knife, I made a horizontal cut, by which I completed the internal flap. M. Danyau grasped this in his hand, and completely commanded the flow of blood. I now exchanged my knife for a straight bistoury, with which, at one stroke, I cut into the capsular ligament and divided the round ligament, luxating at the same time the head of the femur by a strong abduction of the thigh. Resuming my first knife, I carried it behind the head of the bone, and made a horizontal incision outwards, on a level with the top of the trochanter, which completed the external flap. I pulled out the artery with the forceps, and tied it with a double thread; and then secured the lesser arteries that bled in succession; but there were not more than seven or eight requiring the ligature.

"The operation was performed in thirty or forty seconds, not including the time required for securing the vessels; and the quantity of blood lost was supposed to be something less than a porringer full (palette.)" 310.

The little patient did well, and was about to be discharged, when on the 63d day, he was seized with fever and diarrhœa—the cicatrix opened out—and the boy died.

Mr. Guthrie thinks that the principal accident rendering necessary this operation, will be a fracture of the head or neck of the bone, with or without a wound of the great vessels, or some artery causing hæmorrhage and stuffing of the thigh with blood. Few surgeons, he observes, would think of performing this operation for a wound by a musket ball, though such cases may occur. A grape or small cannon shot may strike the forepart of the thigh, and, without touching the inguinal artery itself, in its passage to the neck of the femur, wound some large arterial branches, causing considerable hæmorrhage. The wound may not be large, and yet the chance of saving the life of the patient may be small indeed. Mr. Guthrie recollects two cases of this kind, one after the battle of Vimeira, the other at Salamanca, by a large ball which shattered the neck of the femur and the body of the bone below.

"I did not see this person (an officer) for near forty-eight hours after the injury, but was informed that on his first presentation for assistance, an artery, supposed to be a large branch of the femoral, had thrown out its blood per saltum, and was stopped by pressing some lint on the wound. The limb soon swelled to nearly twice its natural size, with much external inflammation. The patient himself thought his case desperate, as did every one about him, and declared his willingness to submit to any thing that might be proposed; but

the time for operating was past, even if any operation could have been agreed upon.

"After two months of severe suffering, in which there were even some prospects of life being preserved, this gentleman died." 314.

Our experienced author remarks that, when the femoral artery has been torn by a cannon shot, there is, at the moment, a great loss of blood, but the patient does not bleed to death; neither does he appear to die ultimately from the effects of the hæmorrhage. A very extensive injury of the soft parts of the thigh, if the bone be not broken, and the femoral artery not divided, does not authorize the operation, although the artery be laid bare for three or four inches of its course. This Mr. Guthrie exemplifies by an interesting case, of which we shall exhibit an outline.

Captain Flack was wounded in the trenches, at the siege of Ciudad Rodrigo, by a 24 pounder that struck the exterior and anterior part of the left thigh, carrying away the forepart of it from the groin to within a hand's breadth of the knee. The femoral artery lay bare at the bottom of the upper part of the wound, the sartorius and rectus muscles being carried away, and all the muscles on the outer and inner side of the thigh more or less mangled and torn. All the medical officers present declared he must die, unless the limb were removed. In compliance with this opinion, Mr. Guthrie proposed to tie the artery below Poupart's ligament, and endeavour to save flaps to cover the great trochanter, sawing off the bone below, as he has since done in several instances. If this was not found practicable, he intended to remove the limb at the joint. When the patient was placed on the panniers, however, he appeared to be dying, and the unfortunate officer was placed on a hay-mat in one corner of the hospital quietly to expire, a little lint being laid over the enormous surface of wound. Next morning, however, he was much recovered, and his thigh became very painful, he was desired to keep it wet with warm water. In this state he remained till the day after the storming of Ciudad Rodrigo, when the advance of the enemy caused the removal of the wounded across the Agueda. Mr. Guthrie again found the suffering officer, and humanely had him conveyed to his own divisional hospital five leagues distant. Mr. G. daily expected to see the femoral artery give way; but nothing of the kind took place, though the slough from the whole surface of the wound soon separated, with great discharge of pus, the artery lying in a channel completely surrounded by it. Granulations soon began to shoot out, and by the end of three weeks the artery was covered in, although its pulsations were still visible at a distance The sore gradually contracted, and he ultimately did well. This case is rather calculated to check absolute despair, than to inspire hopes in similar circumstances. The following unfortunate case will explain another state of disease in which the operation in question may be necessary.

"Private Mason, of the 23d regiment of infantry, or Welch Fusiliers, had his thigh amputated about its middle during the siege of Ciudad Rodrigo, and was sent to the divisional hospital at Aldea

del Obispo, with the other wounded of the fourth division, those of the other part of the army being in general hospital. For some time he appeared to be doing well, when the wound became irritable, opened out, and sloughed on the under and inner part, with some hæmorrhage. Attention was paid to this both in dressing and searching for the vessel, which could not be found, for the stump ceased to bleed when opened and cleansed, and yet soon filled after the dressings were applied. Finding my endeavours to suppress the hæmorrhage fruitless, I determined on tying the femoral artery above where the profunda is usually given off, as it appeared to be a branch of that vessel that bled. This was effected, as I supposed, about two inches and a half below Poupart's ligament, with little disturbance to the contiguous parts. The hæmorrhage ceased from the stump, and I hoped all would do well. The next morning the bleeding suddenly returned, and about a pound of coagulated blood was removed from the stump. Pressure of the artery against the bone hardly commanded it, and the poor man earnestly begged something might be done to save him. The appearance of the stump had deteriorated very much in the last twenty-four hours, the ulceration was extending deeper between the muscles, and the prospect of the healing of the stump without much exfoliation of bone, even if the hæmorrhage could be suppressed, was but trifling. He willingly agreed to have the stump removed a little below the ligature on the artery, although he was aware his chance of surviving it was doubtful; but, finding himself much weakened from the loss of blood, he said to me, 'I must die, Sir, to-night, if I keep it, and I will take my chance.'

"The artery being compressed against the os pubis, I carried my incisions to the bone, taking the ligature on the artery as the centre; and in doing this, I observed a vessel equal in size to the one I had tied, running down a little distance behind and on the outside of it, which I immediately secured. The head of the bone was now removed from the acetabulum without difficulty. Fourteen vessels were tied; yet little blood was lost, as my two assistants, Mr. Cartan, now surgeon of the 8th regiment, and Mr. Loane, late surgeon of the 94th, the only professional men present, aided me in pressing on the mouths of the vessels with their fingers, until I could take them up in succession. The parts were brought together, and the integuments retained in contact by two sutures with the needle above and below, assisted by adhesive straps. The operation from first to last was completed in less than a quarter of an hour, and the man bore it heroically. I had even strong hopes of him for the first hour, but he gradually sunk, and died seven hours after the operation.

"On examining the original stump I found the femoral artery perfectly open where the ligature came off, but from this part it never bled. It was from underneath, the blood came, and from some small branches of the profunda. This vessel was given off from the external iliac, or rather the external iliac divided into two equal branches, immediately after giving off the epigastric and cir-

cumflex arteries. There was the same peculiarity in the other limb, and the vessel acting as the profunda sunk into the thigh at the usual place. I have always thought this man would have lived if the amputation had been performed when the femoral artery was tied, which operation of course could not succeed, from the peculiarity in the origin of the profunda." 320.

The most common cases requiring the performance of this operation, at a late period, are, Mr. Guthrie thinks, compound fractures above the middle of the thigh, which have been badly or unsuccessfully treated, and in which the bone as well as the soft parts become a mass of disease, or cause such continued pain and irritation to the patient, that the operation offers the only chance for life. The two cases that occurred in England, one of which proved completely successful, were of this nature. The unsuccessful case lived till the 30th day, and the account of it is drawn up by Dr. Emery, inspector of hospitals. We shall sketch an outline of it here.

Sebastian, a corporal in the Chasseurs Britanniques, received a wound in the left lower extremity, in Spain, in August, 1813; the ball entering the upper and outer part of the thigh, passing obliquely downwards and inwards, fracturing the os femoris, passing through it, and extracted about the centre of the sartorius muscle. In February he arrived in England, the wounds discharging copiously, the limb much indurated, and the patient in a low irritable state. The ossific deposition was so great that the thigh, both above and below the fracture, became considerably enlarged, the old original bone having grown carious to a great extent, attended with sinuses in the soft parts running up to the trochanter major, and downwards to the condyles. On the 18th July, 1814, a consultation was held on the patient, his body being much emaciated and reduced by hectic fever, night sweats, and diarrhœa, the extremities cold and œdematous, appetite gone, and the constitution evidently giving way. The patient consented two days after this, and the operation was performed in the following manner:—

"On the 21st, having agreed to the operation, the symptoms being more favourable, he was placed diagonally on a narrow table, supported by a strong man behind; the operation was then commenced by making an incision with a large scalpel through the integuments, beginning four fingers' breadth below the anterior superior spinous process of the ilium, which was carried with a convexity downwards on each side of the thigh, and meeting close to the tuberosity of the ischium: the adipose membrane was then separated from the fascia and drawn upwards; the femoral artery was next laid bare by dissection, and secured below the giving off of the profunda, by passing an eyed probe under it with a double ligature, which being separated, were tied in two knots half an inch asunder, and the vessel divided between them; the vein was also tied, to prevent an effusion of blood from the limb. The scalpels were now laid aside, and an amputating knife applied close to the retracted edge of the skin, cutting obliquely down through the muscles of the thigh on the fore-

part and inside. In doing this, the patient lost a few ounces of blood, though chiefly from the veins, which, with the arteries then cut, were immediately secured by ligatures. After this the incision round the thigh was finished, by dividing the remaining uncut muscles; which being accomplished, the femur was laid completely bare by dissecting them up with a curved scalpel, first on the outside, entirely above the trochanter major, and then on the inside, till the notch of the acetabulum was rendered perceptible, through which a double-edged bent bistoury was introduced into the capsular ligament, dividing with it also the round ligament, which was made to present itself by turning the limb outwards. The head of the bone was next extracted, the vessels taken up, and the operation finished by removing, with the same bent instrument, as much of the cartilage that lines the cotyloid cavity as could be got at, scarifying what could not be easily taken away, and detaching some ligamentous filaments and synovial apparatus. The wound was then cleansed, brought together in a straight line, and secured by four sutures passed through the cellular substance at equal distances, nearly close to the edges of the skin, supported by strips of sticking plaster, covered with pledgets of lint, common dressings, &c. and the whole made fast by a broad calico bandage, to which a cushion was attached, being fixed so as to press on the parts opposite, with a view of making them fill the cavity caused by the removal of the trochanter major, and act as a prop to the external and inferior side of the stump. He was immediately put to bed, and a draught composed of forty drops of tincture of opium and of spirits of nitre was given." 323.

The patient slept well the night after the operation, and during several periods of the succeeding thirty days he promised well, both as to constitution and wound. A bowel complaint, however, appears to have harassed him the greatest part of the time, and towards the close there were two or three hæmorrhages of trifling extent. On dissection, besides a highly morbid state of the parts engaged in the operation, the liver was found enlarged to the weight of seven pounds; of a straw colour externally, and like as though it had been parboiled in its internal structure. The stomach and jejunum bore marks of inflammation.

Mr. Brownrigg, surgeon to the forces, has thrice performed the hip-joint operation, in one case with complete success. The man received a gunshot wound in the thigh, which fractured the bone close to the trochanter, in December, 1811, near Meisda, in Spain. About a year afterward the operation was performed, and the man is now living at Spalding, in Lincolnshire, perfectly well.

After the battle of Waterloo Mr. Guthrie performed this operation successfully on a French soldier, who had been left for several days on the field of battle, without surgical aid or sustenance. The detail is too long for us to attempt an abbreviation, and we therefore refer to the work itself for the particulars. The man is now in the Hotel des Invalides at Paris, and in very good health. The

wound requiring the operation was by a musket ball, which entered behind, fractured the neck of the femur, and made its exit anteriorly, about four inches below the groin. In addition to his wounds, which had put on a sloughing appearance, he suffered from an extensive sore on the sacrum, which was caused by lying on the wet ground for five days.

As our limits are drawing to a close, we must be brief in our further *historical* notices of this important operation. Mr. Cole operated in this way, on the 6th April, 1814, after the unsuccessful attack on Bergen-op-Zoom. The patient was in a bad state of health, and only survived the operation 24 hours. Dr. Blicke's patient survived eight days. Mr. Brodie's and Mr. Carmichael's cases were also unsuccessful.

The cases alluded to prove, as Mr. Guthrie justly remarks, that the operation is not only necessary but practicable, "and that it may be effected with success under certain circumstances." If this be granted, which we apprehend it must, then the operation ought to be recommended "in every case in which it alone can bring relief, or offer a prospect of success." No man, consequently, should be allowed to die, without its being proposed to him; and if it be a case for primary operation, the sooner it is done, on the field of battle, consistent with propriety, the greater will be the chance of success.

We shall pass over Mr. Guthrie's observations on the difficulty of suppressing the current of blood in the larger arteries, since every military and naval surgeon has had repeated proofs how easily the inguinal and subclavian arteries, in a healthy state, can be completely controlled by even a very moderate degree of pressure. With the knowledge of this important fact before him, Mr. Guthrie objects to Baron Larrey's preliminary step, in the hip-joint operation, of tying the artery and vein, as being unnecessary and tedious. We shall give Mr. Guthrie's own method in his own words.

"The patient should be laid on a low table, or two field panniers placed together, covered with a folded blanket to prevent the edges giving pain, and properly supported in a horizontal position. An assistant standing on the opposite side, and leaning over, should compress the artery against the brim of the pelvis, with a firm, hard compress of linen; such as is generally used before the tourniquet; he should also be able to do it with his thumb, behind the compress, if it be found insufficient. The surgeon standing on the inside, with a strong, pointed amputating knife of a middle size, makes his first incision through the skin, cellular membrane, and fascia, so as to mark out the flaps on each side, commencing about four fingers' breadth, and in a direct line below the anterior superior spinous process of the ilium in a well-sized man; and continuing it round in a slanting direction at an almost equal distance from the tuberosity of the ischium, nearly opposite to the place where the incision commenced. Bringing the knife to the outside of the thigh, he connects the point of the incision where he left off

with the place of commencement, by a gently curved line, by which means the outer incision is not in extent more than one-third of the size of the internal one. The integuments having retracted, the glutæus maximus is to be cut from its insertion in the linea aspera, and the tendons of the glutæus medius and minimus from the top of the trochanter major. The surgeon now placing the edge of the knife on the line of the retracted muscles of the first incision, cuts steadily through the whole of the others, blood-vessels, &c. on the inside of the thigh. The artery and vein, or two arteries and a vein, if the profunda is given off high up, are to be taken between the fingers and thumb of the left hand, until the surgeon can draw each vessel out with the tenaculum, and place a ligature upon it. Whilst this is doing, the assistants should press with their fingers on any small vessels that bleed. The surgeon then cuts through the small muscles running to be inserted between the trochanters, and those on the under part of the thigh, not yet divided; and with a large scalpel opens into the capsular ligament, the bone being strongly moved outwards, by which its round head puts the ligament on the stretch. Having extensively divided it on the forepart and inside, the ligamentum teres may now be readily cut through. The head of the bone is then easily dislocated, and two or three strokes of the knife separate any attachment the thigh may still have to the pelvis. The vessels are now carefully to be secured. The capsular ligament, and as much of the ligamentous edge of the acetabulum ought to be removed as can readily be taken away. The nerves, if long, are to be cut short, the wound well sponged with cold water, and the integuments brought together in a line from the spinous process of the ilium to the tuberosity of the ischium. Three sutures will in general be required, in addition to the straps of adhesive plaster, to keep the parts together; the ligatures are to be brought out in a direct line between the sutures, a little lint and some compresses are to be placed over the wound, and on the under flap, to keep it in contact with the cotyloid cavity, and assist the union of the parts. A piece of fine linen is to be laid over them, and the whole retained by a calico bandage put round the waist, and brought over the wound.

"It is recommended to pare the cartilage from the bone; and if this could be readily done, I would agree to it, but the cartilaginous surface of the acetabulum is not to be cut away without much difficulty and some time, which cannot be spared: for I consider the success of the operation to depend very much upon the quickness with which it is performed, not on account of hæmorrhage, but to avoid the shock the constitution receives from the continued exposure and irritation of so large a surface in the immediate vicinity of the trunk of the body. It is proved by experience to be unnecessary at the shoulder-joint; and will, I think, be found equally so at the hip." 354.

In conclusion, Mr. Guthrie states, that in February, 1817, he amputated at the trochanter major, in presence of Mr. Astley Cooper, who compressed the artery at the groin. The limb was removed by

a circular incision, nearly, however, in the manner above described. The bone was sawn through at the trochanter major, and the arteries tied afterward, a ligature being placed separately on the femoral artery and on the profunda. The patient lost very little blood, and was not more than fifteen minutes under the operation. In this case matter formed in the stump in four different places, requiring four incisions of two or three inches in length, to give free vent to the discharge. At the end of six weeks he was walking about the streets on crutches. But being caught in the rain, in Bond-Street, he was attacked with thoracic inflammation, of which he died.

Our limits are so far exceeded that we cannot notice the many improvements which the formerly published part of this work has experienced. Neither can we do justice to the new edition of Dr. Hennen's volume. These two works will necessarily be in the hands of all naval and military surgeons, as well as those surgeons in civil life who are at all in the way of operations. To these classes in particular we most urgently recommend the volumes before us, as highly illustrative of the exalted eminence to which BRITISH MILITARY SURGERY has attained, and exceedingly honourable to the officers who have effected such improvements in the surgical science of their country.

XIV.

A History of the Epidemic Fever, which prevailed in Bridlington and the Neighbourhood, in the Years 1818 *and* 1819. By HUMPHRY SANDWITH, Surgeon, Bridlington. *Also, Observations in Medicine and Surgery.* By THOMAS SANDWITH, Surgeon, Beverly. One volume, 8vo. pp. 327. London, 1821.

"Leges omnium salutem singulorum saluti anteponunt; sic vir bonus et sapiens, et legibus parens, et civilis officii non ignarus, utilitati hominum; plusquam unius alicujus, aut suæ consulit." *Cicero de fin. bon. et mal.*

SYDENHAM, in his epistle to Dr. Brady, complains that four years after the publication of his Observations on the Use of Bark in Intermittents, his precepts remained unnoticed, or contemned by his cotemporaries. Nay, in return for his exertions to enlighten his professional brethren, the ENGLISH HIPPOCRATES was loaded with vituperations by those persons—"de quibus hoc habeo dicendum," says he, "quod si vita innocua hominis, qui neminem neque facto, neque dicto, læserat, me ab illis sartum tectum reddere valuisset, nunquam in me detonuerant." Thanks to the PRESS, no valuable work can now slumber unnoticed for four long

years—or even as many months. Neither dare Slander raise its snaky heads against the promulgators of useful facts or ingenious doctrines without danger of a fatal recoil on itself. The muzzled monster can now only gnaw, in dark holes and lurking places, the reputations of those whom it dare not openly assail; because public sentiment will not permit such unprincipled aggressions in matters of science —and particularly medical science. We maintain then, that in these respects, we live in a better age than did Harvey or Sydenham. In ancient times FAME marched on foot, "magnas *it* fama per urbes," however high she might lift her head among the clouds; but now Fame and Knowledge are wafted with more than was ever fabled of Cyllenian velocity over every portion of the civilized globe. That the press pours forth error with truth, like fabled FAME of old, "tam *ficti* pravique tenax, quam nuntia *veri*," is not to be denied, nor even wondered at, considering the imperfections of our nature, the narrow limits of our capacities, and the infancy of our science; yet, were the proportion ten times greater than it is, it would weigh as nothing in the light of an objection to books. The paramount utility of reading does not consist in the quantum of information directly received, though that is considerable; but in the mental exercise and excitement thus produced, by which the intellectual faculties are strengthened and rendered more capable of profiting by direct and personal observation and experience. Books therefore which are well calculated to stir up *thought* in the reader, are often of more service than those which contain richer materials buried under an awkward exterior, and conveyed in confused or barbarous language. The Pedagogues who clothed the idea of Sydenham in such difficult and elaborate language, (a curse in perpetuity on candidates for academic honours, per omnia secula seculorum,) must have done him a great injury in his own days, and rendered every subsequent translation participant in the deformities of the original. Medical writers are now growing wiser, and many of the wisest attend to language and style. Those who neglect the attractions of composition, and particularly those who, from carelessness or innate defect, convey their thoughts in obscure instead of luminous diction, suffer from a cause which, though not openly assigned by their readers, is not the less operative in its results. It will not do, in these days, to spread our thoughts on paper in characters that require deciphering—or in long sentences that demand reperusal before their drift can be understood. Yet there are, and have been, many writers whose obliquity of intellect (for we know not how otherwise to account for the

phenomenon) renders turbid every stream of thought that passes through their brain, and thus they mystify that science which they undertake to elucidate. These observations are general, and not addressed to particulars—still less are they applicable to the work before us, which evinces a vigorous conception, united with perspicuous delivery, in its intelligent authors.

The first division of the work, (on the epidemic fever,) by Mr. Humphry Sandwith, is the only part which we shall attempt analytically to delineate in the present number of the Journal, reserving the miscellaneous observations, by Mr. Thomas Sandwith, for our next. To say the truth, we have been much gratified by the perusal of this volume generally, and even where we cannot entirely coincide in the views of Mr. H. Sandwith, we admire his ingenuity, his candour, and his independence of mind. The strength of his judgment too, and the force of his reasonings, are well calculated to make strong impressions in his favour on the minds of his readers.

Messrs. S. address their work to Dr. John Simpson, of Malton, as illustrative of principles long acted on with success by that Physician, while they thus publicly acknowledge their professional obligations for the benefit of his conversations and correspondence. We are always gratified to observe this unanimity and friendly co-operation among the members of our profession; and deprecate most heartily every act, word, and writing, calculated to produce irritation, excite the turbulent passions, or keep up those repulsive manners which too often, alas! unhinge the frame of medical society, by sowing the seeds of discord where harmony should prevail. Every wise and good man should discountenance, publicly and privately, all tendencies of this kind, as in ical to peace of mind among individuals, and subversive of that public esteem which can only be maintained by the profession, as a body, while philosophic decorum and mutual urbanity prevail.

The first section of the work before us is dedicated to meteorological observations, and a topographical sketch of Bridlington and its vicinity, which we shall pass over; the second section is headed "Internal Evidences" of the epidemic, comprehending, 1st, those cases in which the nervous system suffered merely from the agency of general fever—2dly, those in which the nervous system was thrown into additional disorder by intensely sympathizing with inflammation or congestion of some important organ—3dly, where the nervous system appeared to be implicated in idiopathic or primary inflammation or congestion.

I. *First Species, or Simple Typhus.* Mr. H. Sandwith justly observes, that when we come to class fevers, we find cases holding a place so exactly intermediate, that it is difficult to assign them their situation. Thus, what he denominates "simple typhus, bordering

on the inflammatory," might, he conceives, be considered with much justice, as mild cases of the inflammatory species; yet, the description of this variety forms a sort of connecting link which unites simple and inflammatory typhus.

During the late epidemic, thirty-four examples of simple typhus presented themselves to our author, of which, eleven assumed its more aggravated character. To the readers of this Journal the symptoms of simple typhus need not be detailed. They are slightly sketched by our author, from a conviction that a minute detail was unnecessary. Although this form of fever had an open expression, yet the utmost sagacity could not, from early symptoms, predict, with certainty, that the disease would pursue a safe and gentle course.

"In fact, many examples of this species of fever, I allude to those of 'Simple Typhus bordering on the Inflammatory,' were restrained within the limits of the present classification, and prevented from passing into the inflammatory or congestive forms by the timely use of the lancet or leeches, in other words, *by anticipating evil.*" P. 17.

Our author concludes, with Dr. Percival, that the degeneracy of this fever was considerably, if not principally, dependent on delay or neglect of energetic remedial treatment.

Simple Typhus bordering on the Inflammatory. The aspect of this variety impresses the medical attendant with the sense of more existing danger than in the preceding. In our author's experience there was greater prostration of strength—higher degree of temperature—greater local pain, whether in the head, chest, or abdomen. Where pulmonic disturbance prevailed, the distress was more exquisite. The bowels were more intractable—nervous irritation, both mental and corporeal, more distressing.

"The nature of simple typhus will be further illustrated by a view of its duration, allowing for the influence of treatment. Premising that critical days were seldom noticeable, I find there were three recoveries within the first week, seven in a fortnight or less, seven in three weeks or less, eleven in a month or less, four in five weeks or less, and two in about six weeks." 20.

Mr. S. seldom marked the regularly formed crisis so well described by Dr. Cheyne, as consisting of three stages—one of general disturbance, a second of rigour, and a third of perspiration, resolving the complaint. On the contrary, a gradual, though increasing perspiration, or an improving and soluble state of the bowels, or long-continued and refreshing sleep, with the gradual resumption of impaired vital functions, terminated the disease.

II. *Second Species*, where the nervous system intensely sympathizes with inflamed or congested organs. In the first species no lives were lost—in this, some few failures took place. The author

confesses (perhaps with more candour than justice) his conviction that more energetic measures might possibly have saved even these. But men will die, under the most judicious treatment sometimes. When the French soldiers at Flushing petitioned Napoleon to remove them from a situation where they were dying, his answer was equally laconic and true—"L'homme meurt par tout"—"men die in all kinds of places."

The nervous system is disturbed by simple inflammation of an internal viscus, as well as in simple typhus. This disturbance will, of course, be much increased when both morbid conditions are combined. In this variety, the typhoid countenance was rendered peculiarly impressive by the physiognomy of distress or even agony. Intellect, sensation, the developement of temperature, and the motion of the voluntary as well as involuntary organs, were all seriously affected. Acute bodily pain, no less than occasional injury of the different organs of sense, indicated much interference with the function of sensation. The secreting organs were much deranged—the pulse ranged from 100 to 140, and the animal heat was morbidly increased, in half the cases, excessive.

Mr. S. thinks that one great cause of the nervous disturbance may be attributed to the pulmonary affection, which, by obstructing the free return of blood from the head, deranges the sensorial functions. "But it is not improbable, that the delirium may also, in part, depend on those inexplicable sympathies which exist in the nervous system." In some cases Mr. Sandwith found that the brain became inflamed after sympathizing for some time with other inflamed organs. The duration of this species varied exceedingly —recovery taking place at different periods from the 5th till the 43d day. The occurrence of critical days was noticeable only in two instances. Of the two fatal cases, one died on the 17th, and the other on the 18th day.

III. In the THIRD SPECIES Mr. S. conceives the nervous system to be essentially implicated in an idiopathic and primary inflammation—or congestion, with occasional subsequent disturbances elsewhere.

In the Bridlington epidemic the numbers of this formidable variety nearly equalled those of both the preceding. In order to prove "that the disorders *observable* in the nervous system have their *origin* in vascular derangement," Mr. Sandwith presents us with the minutes of a dissection—the only dissection, unfortunately, which he was allowed to make. The symptoms of this case nearly corresponded with the account given by Dr. Armstrong of the less severe forms of congestive typhus. The fever lasted three weeks, ending on the 21st day.

"I only witnessed its course during the last eleven days; in the first five of which there was generally slight yet distinct mental aberration, with occasional maniacal extravagancies; and in the last six almost constant delirium, with great reduction of the bodily strength.

Every symptom pointed to the centre of the nervous system, as the vitiated source of the febrile phenomena. The duration of the disease, and the peculiarities of the patient, withheld my hand from unsheathing the lancet. She was a delicate female, had borne many children, and gave suck at the time; she was moreover the subject of domestic affliction, and from extreme poverty was ill-nourished. The appearances of debility, though more seeming than real, served still further to intimidate me. On these accounts, leeches, purgatives, alteratives, and blisters, with a seton in the neck, were relied on only to prove their futility. The case occurred in September, 1818; the patient's age about forty; the weather cold and moist. In an adjoining street another fever patient died, I believe, with most of the symptoms described in this case. In that case too no blood had been abstracted. My patient had long been the subject of occasional paroxysms of low melancholy derangement." 34.

On dissection the dura mater was found strongly adherent to the cranium—the pia mater morbidly attached to the dura mater, in certain places—great effusion of semi-transparent fluid under the pia mater—effusion into the ventricles and theca vertebralis, as far as the eye could reach—the pia mater bloodshot in the extreme between the convolutions of the brain—points of blood issuing from the sliced surfaces of the cerebrum and cerebellum. In the chest some adhesions were seen between the pleura pulmonalis and pleura costalis, the thoracic viscera themselves being sound. In the abdomen the principal morbid appearance was a vascular turgidity in a portion of the ilium.

That the above appearances, and "the disorders *observable* in the nervous system," resulted from derangement of the vascular system, no one will deny; but we do not see how it can be inferred from this that the *original* or primary derangement of function in the nervous system was produced by the vascular system. On the contrary, all the physiological and pathological phenomena appear to lead us to the conclusion, that the first morbid impression is made on the nervous system—that vascular derangement follows, and that alterations of structure is the result of all.

The observations which follow from page 36 to page 65 we must pass over, as incapable of analysis, and being interspersed with numerous quotations from the writings of Drs. Armstrong, Clutterbuck, Percival, and Bateman.

The third section of the work embraces the important subject of TREATMENT, in which our author finds it impossible to avoid taking an extensive survey of the different therapeutics employed in typhus fever. The principal of these is blood-letting; the utility of which, Mr. S. considers as established by the experience of two centuries.

"They who can view without concern the progress of the vascular derangements which are apt to occur in fever, as chiefly indicated by the most obvious deviations in the economy of the nervous system, and see this system itself exposed to the risk of irreparable organic lesion with the same indifference, cannot habitually connect

symptomatology with morbid anatomy; neither can they reflect on the strength of those sympathies, and the force of those mutual relations, whose unimpeded harmonious play is essential to life in man and the higher order of animals. Their reliance on the powers of nature unaided, or assisted only by the most contemptible auxiliaries, to defy a coalition of hostile influences against existence itself, makes not only the depth of their pathological researches questionable, but their acquaintance with physiology itself liable to suspicion." 68.

The epidemic witnessed by our author was not to be trifled with. Where blood-letting was not employed at all, or tardily and inefficiently had recourse to, organic lesions were the consequence. When, in bad cases, our author substituted leeches for the lancet, "disappointment and vexation awaited him."

From page 77 to page 107, our author undertakes to prove "that blood-letting is by far the most efficient agent ever wielded in the contest with fever." The general truth of this proposition is proved, he thinks, by the fact, that the mortality of continued fever is much less now than formerly. But unless he can show that fevers are the same now as formerly, and that the other items in the treatment and regimen are the same, we fear his proposition must appear extremely defective. For our own parts, we are firmly convinced that no two epidemics are alike, or will yield to precisely the same treatment—a belief as old as the days of Sydenham at least. At the same time we believe, with Dr. Welsh, that in *all* fevers, blood-letting is our principal remedy to guard against or remove inflammatory affections of particular organs arising in the course of the fever.

"It may confidently be asserted, that in all severe cases of the disease in which recovery takes place without bleeding, that event may be considered *an escape* rather than *a cure*. The distinction may seem an invidious one to the abettor of the doctrines which it is my aim to refute. Nevertheless it is sanctioned by a reference to the pathology of fever, no less than by the plainest dictates of experience. Nothing can more forcibly illustrate my meaning than the following memento by Dr. Bateman. "I lately witnessed the complete and immediate extinction of the fever in two cases, (not in the House of Recovery,) by a single blood-letting: the one performed on the fourth and the other on the fifth day. The head, in both, was considerably affected with threatening delirium; but the pain and intellectual disturbance were instantaneously removed, and the patients left their beds in two days. In one of these patients an attack, marked by precisely the same symptoms, had occurred three years ago, which was not arrested by a free cupping; but the fever went on with severity, and terminated with a formidable derangement of the intellectual functions, and a tedious recovery."* P. 79.

* Bateman on Fever, p. 99.

While we perfectly approve of Dr. Bateman's treatment in the two cases above mentioned, we believe that very few of our brethren, who have seen much of typhus fever, will be disposed to admit that such fever is often to be cut off on the fourth or fifth day of its march. An inflammatory affection of the encephalon will, of course, present all the phenomena of fever, and may be sometimes arrested in the above manner; but when fever rises in consequence of typhous infection, we have good reason to know that it will rarely yield to the treatment in question, till it has run a course.

In nothing, Mr. S. observes, was the power of the lancet more conspicuous than in the rapid removal of delirium, notwithstanding the deep hold which that affection had taken on the sensorium, "and though acute functional disturbance had nearly lapsed into fatal organic lesion." 80. "Used still later, and when incipient effusion perhaps, or approaching gangrene, has sapped the foundations of life, the lancet will only accelerate death." On such melancholy occasions our author has pushed the cordial plan to the fullest extent, without any corresponding advantage. In a few most desperate cases, (of a former epidemic,) our author has succeeded, "but which, it appears to him, were examples of general exhaustion merely, accompanied perhaps with slight local inflammatory congestions." He suggests, with Dr. Wilson Philip, in such cases, the use of galvanism.

Cases of extreme exhaustion, according to our author's observations, were by no means peculiarly the result of the evacuant practice. They almost exclusively occurred "under a plan of treatment which excluded the lancet."

"And a very good pathological reason can be assigned for the fact. The truth is, that by those local congestions which are the cause of endlessly repeated reaction, the duration of fever is incalculably augmented, and the powers of life exhausted. On the other hand blood-letting has evidently the power of abridging the duration of fever. 'Instances of this fact,' says Dr. Welsh, 'might have been multiplied to an immense extent, almost to half the number of patients received into Queensbury House.'" 85.

To the question "how late can we bleed in typhus fever?" no satisfactory answer can, of course, be given, since, like the quantity to be taken away, it must depend on the existing circumstances of the case. The cases published by Dr. Welsh prove that we may bleed at a much later period of the disease than was generally imagined, though the extent to which that gentleman carried the measure lies open to some objections.

The next point which Mr. Sandwith urges is, that blood-letting is an indispensable measure of *precautionary* safety in the majority of cases. After several acute remarks, and some strictures on recent publications, our author makes the following statement of his own:—

"Upon the whole, therefore, the rule of bleeding in every case, when we are called in early, in order to avoid the unpleasant dilemma of being surprised by unforeseen danger, seems to me generally

though not universally applicable. We have instanced the exception of peculiarity of type. We might further name, as exceptions to the practice, extreme debility, and a peculiarity of constitution not bearing general abstractions of blood. In the practice of medicine, indeed, nothing is more annoying than the union of congestion with constitutional debility; as for instance, where in a state of health we find cold hands, a weak and hurried action of the arteries, frequent perspirations, weak digestion, and great nervous irritation.* The circumstances which would forbid the use of general bleeding, with a view to anticipate danger in fever, are not therefore very numerous. In the latter part of my practice, I have employed this method with scarcely any exception, and always with the happiest effects. In several of them, though the fever went on with considerable severity for some time, we were never appalled by the developement of a single untoward symptom; though from the violence of the attack in some instances, great danger would in all probability have succeeded to less active measures. Sometimes delirium never appeared at all; at other times, it was so slight as scarcely to deserve the name. In one case, bleeding on the second day, 'arrested the fever' instantaneously. The same happy consequence was observed in a second instance also. But it is imperiously necessary that the bleeding should be a free and decisive one, and that in urgent cases it should be repeated with a vigour proportioned to circumstances; otherwise it will be more mischievous than salutary, for it may, if deficient, conceal increasing danger under an imposing but deceitful appearance of improvement." 104.

With respect to the subject of anticipating danger in fever by general bleeding in the earliest periods of reaction, "it cannot excite our surprise that we should meet with so little information in the works of our best hospital writers on fever." But if Mr. Sandwith had consulted the writings of army and navy practitioners, he would have found much information on this point. We refer him, therefore, to the writings of Jackson, Irvine, Boyle, Dickson, M'Arthur, Burnett, Fergusson, Sheppard, and many others who, in watching the health of our soldiers and sailors, had the means of employing the most active measures in the earliest stages of fevers. Mr. Sandwith's observation can apply only to the physicians of civil hospi-

* "And yet great stress cannot be laid even on this exception: for the most experienced physicians have remarked, that there are cases of constitutional idiosyncrasy, where, under ordinary circumstances, the loss of blood is so ill borne, that a very few ounces taken from a vein, or even by a leech, is followed by syncope and by excessive languor and other ill consequences, for days and weeks afterward; and yet the same patient under an attack of febrile symptoms, bearing even the slightest marks of inflammation, shall suffer a moderate bleeding without inconvenience, and even repeatedly during the progress of the disease with manifest advantage. For this remark I am indebted to Dr. Storer of Nottingham." P. 103.

tals, where, of course, disease is but seldom seen in its nascent movements.

"I have not much to offer on the virtues of other remedies in fever, besides venesection. I found mercury a valuable auxiliary to the lancet, though I always premised adequate depletion by the latter. I employed it in the inflammatory and congestive forms of the disease for the same purpose, and with the same effects, as when given to suspend the adhesive stage of simple inflammations of the viscera. Under these circumstances, and after due depletion, I saw the most beneficial results from its cautious employment. I preferred the pil. hydrargyri, in moderate doses, so as not to pass off by the bowels, in conjunction with digitalis, to calomel in union with opium, as recommended by Dr. Armstrong." 108.

In some protracted cases with restlessness and nervous irritation, moderate doses of laudanum and antimonial wine, procured sleep and hastened recovery. "Friction of the abdomen with an anodyne liniment, preceded by fomentations, was useful at a late stage, in conjunction with mild aperients, in removing pain unaccompanied with tenderness on pressure."

"In the early periods of the disease, I employed saline cathartics, and occasionally calomel, with a liberal and steady hand, taking especial care, however, to avoid hypercatharsis. As the debility increased, I either combined camphor with senna mixture without salts, or substituted castor oil or rhubarb. If any measure can be substituted for bleeding, it is free purgation, which in case (12) invariably averted a strong tendency to pulmonary organic mischief unaided either by the lancet or leeches." 109.

Mr. S. informs us that experience soon convinced him that it was an illusion to expect a collapse after the first week of fever in all ordinary cases. Accordingly he latterly delayed cordials, in general, till about three weeks had elapsed, and then allowed wine in the most sparing quantities only. Given at an early period, our author justly observes, cordials augment debility by increasing fever and favouring local determination. Similar restrictions apply to diet.

Our author denies the validity of the common opinion that this disease is very simple as it occurs in children.

"The record of the Bridlington Epidemic is of value, as showing that childhood is by no means an invariable protection from its most malignant attacks. In fact one of its most prominent features was the severity of the disease in children and young subjects; who will be found to have constituted a majority in the list of fatal cases. The young practitioner will thus be put on his guard not to relax from that close observation necessary to enable him to detect the earliest developement of danger. Many excellent authorities also advise milder measures for children than for adults. Thus Dr. Prichard, in his History of the Bristol Epidemic, observes, 'In persons of weak habits or much exhausted, and *in children under ten*

years of age, instead of bleeding from the arm or temporal artery, leeches were applied to the head.' The rule, as applicable to the eruptive fevers, has been ably controverted by Dr. Armstrong, in his invaluable remarks on the treatment of measles. And as it applies to typhus fever, my own experience warrants no such distinction. A reference to the Tables will show, that in several instances leeches were wholly inefficacious; while the lancet was signally successful in others of equal danger." 111.

It was our intention to have fully noticed Mr. Sandwith's concluding section on "the nature of fever," which contains many ingenious observations and sound principles of pathology and practice, but we were deterred, when we looked at the long list of works still waiting for analytical review. The same reasons prevent our dwelling on some interesting papers contained in the appendices to this portion of Mr. Sandwith's work. We cannot, however, pass them over entirely.

The first paper is from Mr. Thomas Sandwith, containing recollections of the epidemic, in which he observes that the writings of Sydenham, Rush, Jackson, Beddoes, Clutterbuck, and Hamilton, had in some measure prepared him against "the theories of Brown and Cullen, and the ingenious trifling of Currie." He was determined therefore never to prescribe for the *name* of a disease, but combat the symptoms, whatever they might be—a salutary rule of conduct he learnt from Rush.

The first case that occurred to him made a strong impression on his mind. The patient had been nearly a fortnight ill with fever, and thinking the lancet was inapplicable at that late period, he had recourse to leeches and purgatives, which procured a temporary melioration of the symptoms.

"At the end of the third week, however, instead of crisis, a universal trembling of the limbs and subsultus came on, and the patient died. The event of this case opened my eyes to the necessity of using the lancet, even in the advanced stages of fever; an important addition to my knowledge." 155.

After relating a number of interesting cases, Mr. T. Sandwith lays down the following rule, in which we cannot entirely coincide.

"We should never trust to mild measures in typhus, when the disease sets in mildly. So certain is the occurrence of inflammation in the course of typhus, if not prevented by early bleeding, that the cases in which it does not appear are but exceptions. The objections against blood-letting seldom apply to its early use; and if the fever is mild, it will make it milder." 162.

Upon the whole Mr. T. S. thinks that "the modern treatment of fever is about as successful as that of inflammation." He treated 103 cases of the epidemic, of which six died.

"I cannot conclude these recollections better than in the words of an eminent and honest physician, who flourished a century ago,

Discoursing with Dr. White, whose papers he had perused, on a larger phlebotomy in fevers, 'I have,' says he, 'been long ago convinced that a considerably larger phlebotomy than in practice would be much better many times, than whole gallipots full of medicines for the patient.' N. B. You will find the practices of the moderns in fever anticipated by the sagacity and courage of Dr. White. If you have not read his book, read it.

"Vixere fortes ante Agamemnona
"Multi." 165.

The second appendix contains a very sensible communication from Mr. Dunn, surgeon, of Pickering, now of Scarbro. He informs Mr. S. that, "where bleeding was used on the first three days, he knew of no fatal case, and even when resorted to in the most hopeless cases, he means in those when the febrile action had become rooted in the system, he always found it to tranquillize and cool the patient above all other measures." Mr. Dunn almost lost his confidence in leeches, though in Scarbro, where the vascular excitement does not run so high as in the country, he generally finds them sufficient. He prefers, in general, the lancet.

"With regard to your question of particular organs being affected, I must answer, that here the greatest variety prevailed. The lungs were often attacked in the later periods, but occasionally even in the earlier of the disease; from thence the pain and affliction would shift to the head, the bowels, the back, the limbs, and vice versa. One day I had to bleed the patient for tenderness of the abdomen, the next for violent pain in the head, and in the third, perhaps, or fifth, for the uneasiness of the limbs or back." 169.

Children were "amazingly relieved from acute suffering by the lancet and calomel."

"I once gave twenty grains of calomel to a boy divided in three doses before I could procure stools. The boy had been given up by his former attendant. When I arrived he was insensible, labouring under continued stupor; and seemed in a hopeless condition; as soon as the calomel operated he began to recover."* 170.

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* Mr. Dunn seldom prescribed less than ten grains of calomel, and even larger doses, in adults. An interested cry has been raised by some modern practitioners against the occasional exhibition of large doses of calomel in certain dangerous diseases, especially in the hotter climates of the earth, where disorganization quickly supervenes on inflammation, if not promptly counteracted. A *scruple dose* of calomel has therefore been looked upon with horror, as a thing unprecedented and unwarrantable. If these squeamish practitioners will turn to Sydenham's epistle to Dr. Patman, they will find that the English Hippocrates exhibited this medicine in similar doses, without any *scruples* at all.

"Vel bis in Septimana pil. sequentes exhiberi poterint.
℞. pil. ex. duobus ℈ss. *mercurii dulcis* ℈j. cum q. s. opobalsami f. pil. iv. sumendæ summo mane."

Now if Sydenham gave the above dose twice a week in a *chronic* disease.

Mr. Dunn never prescribed the bark as a tonic; in the febrile state he preferred the muriatic acid, and in the convalescent stages, when the lungs had been affected, he used the aqueous extract of myrrh. In Scarbro he has not found it necessary to adopt such bold measures as in the country. He finds a single bleeding at the commencement, with a cathartic and a suitable regimen generally sufficient.

The 3d appendix is a short communication from Mr. W. Hardcastle, respecting the epidemic as it appeared at Newcastle. Mr. H. refers to the account published by Dr. M'Whirter in the Edinburgh Journal, and avers that, as far as his own observations extended, he saw no cases of what might be termed typhus gravior.

"I almost invariably found the fever accompanied with more or less of inflammatory action in the brain or chest; in some few a tenderness in the region of the liver: affections of an inflammatory nature in the viscera of the abdomen (the liver excepted) were but rare at the onset of the complaint." 173.

To this part of the work are appended extensive tables of individual cases, exhibiting at one view the sex, age, rank in life, and place, form of fever, date of seizure, and if first visit, predominant symptoms, organ most affected, ordinary treatment, date and mode of bleeding, date of evident decline, date of convalescence, number of days sick, probable cause—general remarks. This plan we think an excellent one, especially in epidemics, where the details of a number of cases would swell out a work, and deter men from perusal.

Besides impressing us with a very favourable opinion of the talents of the authors immediately concerned in the volume before us, its contents have added to our conviction that medical knowledge is attaining an immense diffusion and extent through the remotest ramifications of the profession. Works are now every day emanating from the class of general practitioners, which, a few years ago, would have been exceedingly creditable to the class of physicians. This extension of information must be productive of the most important benefits to the cause of humanity in general, and will, we trust, rapidly raise the professors of our art in their own and in public estimation.

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we ask where is the dreadful crime of exhibiting the same in acute diseases, where the intestinal canal is often so torpid as to be with the greatest difficulty excited to its proper function?

XV.

Biographical Notice of the late Professor James Gregory.

Metam properamus ad unam.

Death, though repugnant to the hopes of the individual, and distressing to the feelings of friends and relatives, is yet one of the wisest and most beneficent appointments of an overruling Providence. The human mind cannot embrace the whole extent of misery which must inevitably ensue in this world, were man immortal, or even were the range of his existence much extended beyond the usual term. Strength would usurp power, and never let it go—talent would shoot up to an interminable height, and soon render all attempts or hopes of competition vain; of course emulation would die, and one of the main springs of human action be withdrawn for ever. Wealth would follow the unequal division of power and reputation. There would be no intermediate shades between tyranny and slavery—riches and want—learning and ignorance. Nor would the possession of power, riches, or knowledge, continue *always* to confer happiness or pleasure on the favoured few. *Time* would indubitably take away, sooner or later, the enjoyment of all, and existence would become insipid, if not burthensome. It is no argument against this, that *finite* man is anxious to expand the little range of life which *he knows* is bounded to a span, and must soon terminate. It would be totally otherwise, had he no such fear; and after he had run the same rounds for a few centuries in succession.

As human reason itself, then, points out that Death is the great equalizer of good and evil, and furnishes the main stimulus to all human exertions, so is it equally unreasonable and unavailing to grieve when talent or learning is removed from this world, in the maturity of its growth. Every hour that it is continued beyond that period, it operates as a check on others, or robs them of their fair chance of acquiring similar distinction. This may appear a cold-hearted doctrine when viewed under the impression of local or personal feeling, but we are convinced that it is sound philosophy, and that its tendency is to reconcile us to the apparently hard lot of our nature, without checking the indulgence of any reasonable enjoyment of life.

The far-famed and long-renowned University of Edinburgh has lost one of its brightest ornaments—perhaps one of its main pillars of support. What then?—Institutions must grow old as well as individuals, and ultimately share the common lot of humanity. Nor is this, according to our philosophy, to be considered as an evil, or deplored as a misfortune: far from it. The spirit of inquiry and the thirst of knowledge are principles too pervading at present, to permit the loss of any man, however transcendent his genius—or any ALMA MATER, however extensive her influence, to check, for a

moment, the current of instruction now flowing through such innumerable channels. Were the sun of talent to set (which we sincerely hope will never be the case) on the banks of the Forth, it would rise on the Clyde, the Liffey, the Thames, and the Seine. *Would rise*, did we say? It *has* risen. The monopoly of knowledge is dissolved; and as privileges are extended, competition must increase, so that nothing but actual and commanding talent can now sustain the reputation, power, or wealth, of a medical university. Let the senators of the intellectual city ponder on these things. Their wisest measures cannot prevent the competition around them, nor ensure the undiminished lustre of their school. But if they allow personal influence to supersede professional merit in their future elections, they may inscribe over the portals of their college—"TROJA FUIT."

But our admonitions to the living must not prevent our veneration of the dead. The desire of posthumous fame is a prominent feature, a predominant principle in the human mind. When fairly earned, then, during life, it should not be withheld, although censure cannot provoke the silent dust—

"Nor flattery sooth the dull cold ear of death."

Dr. James Gregory was descended from an ancient family in Aberdeenshire, his father having filled a professional chair in Aberdeen, and afterward in Edinburgh. The subject of the present brief notice was born at Aberdeen in 1758, where he received the rudiments of his education. In 1766 he removed to the University of Edinburgh, and the following year was entered of Christ Church, Oxford, but soon returned to the northern metropolis. In 1773 he came to London to prosecute his professional studies, and became a pupil at St. George's Hospital. In 1774 he graduated at Edinburgh, the subject of his thesis being—"de morbis cœli mutatione medendis." During the year 1775, he was on the Continent, and visited Holland, France, and Italy. It is said that his letters from those countries to his friends at home, prove that he was feelingly alive to all the beauties of Nature, and the treasures of ancient art, there presented to his view. In 1776, at the early age of twenty-three, he was appointed to the professorship of the theory of physic, which he held with distinction for twelve years; and as a text-book for his lectures, published the first part of his Conspectus Medicinæ Theoreticæ, which was completed in 1782. This work acquired a great reputation—principally, we should think, on account of the felicity of classical language in which it is written. It is to be regretted, that in the successive editions the author never endeavoured to make it keep pace with the progress of medical science; hence its value is greatly diminished to the student. The death of Dr. Cullen, in 1790, raised Dr. Gregory to the chair of practical medicine, the celebrity of which he sustained for thirty-two years. "His lectures," says his biographer, "besides their intrinsic merit as the vehicles of sound medical learning, were characterized by a richness of illustration quite unprecedented." Dr. Gregory's memory was

remarkably retentive, and he has been frequently heard to describe cases which had occurred in the earliest years of his practice with a freshness and particularity of detail which made them appear like the observations of the day. No case ever seems to have escaped his memory which could enforce some principle of pathology or practice; and he could draw, therefore, almost *ad libitum*, upon these stores, for striking illustrations of the doctrine he was inculcating. This was an attractive feature in the Lecturer, and always made a deep impression on the audience. How far Dr. Gregory's lectures aided the press in the diffusion of just notions in pathology, and bold measures in practice, we cannot form any probable estimate —but doubtless they were powerful auxiliaries. The immense mass of medical information which he possessed, has perished with him; for the notes taken by his pupils are not only defective, but devoid of all his practical illustrations. We consider Dr. Gregory as highly culpable in not taking means to transmit as much as possible of his valuable knowledge to posterity through the medium of the press. Every man—and particularly every public man, in the confidence of his brethren and the plenitude of practice, should not merely put his talent out to advantage—but to the *best advantage*. This Dr. Gregory has not done; and it is greatly to be lamented that he had not dedicated those quartos of squabbling controversies to more dignified and professional pursuits!

We believe that for the last twenty years few physicians had more extensive practice; yet such was the liberality of Dr. Gregory's disposition, that his income was never what the celebrity of his name, and the number of his patients might give reason to expect. We believe, too, that "his generous heart was always open to afford that relief which wealth can bestow." We can easily conceive with his biographer, that "the loss of such a man will be felt as occasioning a blank almost irreparable in the academic celebrity of Edinburgh;" but we are not disposed to fear, with him, that the death of any individual can produce a similar blank in the "national distinction of the country."

We have studiously avoided the language of panegyric, which is feelingly employed by the biographer, though naturally and pardonably so in him, as dictated by friendship. Our feelings, of course, are under the guidance of cool contemplative philosophy, which views things in their general, rather than in their local, bearings, and loves to deduce moral lessons alike from evil and good, adversity and prosperity, death and life, vice and virtue—which, in fine, sees with the mind's eye—

> "Sermons in stones, books in the running brooks,
> "And good in every thing."
>
> SHAKSPEARE.

XVI.

MISCELLANEOUS INTELLIGENCE.

In Kentucky, the oldest, wealthiest, and most cultivated of the Western States of America, a university has been erected which promises to be of essential benefit to that rising state. This university is situated in the town of Lexington, containing a population of about six thousand, wealthy, cultivated, and refined. This town stands in the midst of a beautiful and fertile tract of country, thirty miles in diameter, containing about ten places of worship, several public buildings, a reading room, or atheneum, and a very good circulating library. The university edifice is not surpassed in size, or elegance, by any in the United States. In the year 1820 there were 282 students of different kinds. Dr. Charles Caldwell, late of Philadelphia, is Dean of Faculty, and Professor of the Institutes—Teacher of Materia Medica, &c. with a private class in Medical Jurisprudence.

VENTRILOQUISM.

This curious physiological phenomenon has never, perhaps, been more finely exhibited than by M. Alexandre, now performing in this metropolis, and about to proceed to different parts of the country. We entreat the attention of our professional brethren to this extraordinary operation of the respiratory organs, as well worth their notice.

PREPARATION OF OPIUM.

We are informed by an esteemed correspondent that in the following preparation of opium the taste and smell of that medicine are completely concealed, and that it leaves much less of the unpleasant effects of opium on the system than the tincture prepared according to the pharmacopœia.

℞. Extr. Glycirrhizæ
——Opii . . āā ℥ss.
Potass. Carb. . ℥j.
Aquæ . . . Oiij.

The whole is to be boiled to Oj. the clear liquor to be poured off, and evaporated to ℥xij. then add spirit of pimento ℥iv. cochineal in fine powder ℥ss. It is said to leave no unpleasant effects on the stomach or head.

HUNTERIAN ORATION.

Mr. Chevalier has just published his Hunterian Oration, delivered before the College of Surgeons, in February of the present year. It is written with considerable elegance and force of thought, displaying much erudition, and, what we prize more highly, philanthropy, liberality, and fine moral feeling. We shall have room but for two or three extracts from this interesting oration. The first exhibits a feature of Mr. Hunter's character, which it would be wise for all to keep before their mind's eye, from the highest to the lowest of the profession.

"He was that true and lofty spirit of science, which will not condescend to seek for eminence or wealth, by arrogating a degree of skill and dexterity that no other can attain, or vaunting a remedy with which no one else is acquainted; but which rests for its reward on the fair fame and merit of its acts; which is ever intent on the discovery of truth, and is then most of all delighted, when it can most effectually assist others in the common labour and duty of us all—the advancement of human knowledge, and the alleviation of human distress." P. 76.

After descanting, though very modestly, on the advantages which society at large has derived from the Royal Institution of Surgery, which the orator addresses, he displays his liberality of sentiment in the following passage:—

"But while we reflect with satisfaction on the prosperity of our own exertions, we must not omit to acknowledge, with the great respect that is due, the manifold public advantages which have constantly been derived from those of the Royal College of Physicians; who not only in these brighter days, but through a long era of comparative darkness and prejudice, preserved the light of medical science unextinguished and pure; and who, for three centuries, continued to reflect honour on this nation, by members eminent for learning, great in science, and distinguished by the first excellence in professional attainments. Having enjoyed in our universities the highest means of cultivation that are provided for the human intellect, and then devoting themselves to the study and practice of medicine; these enlightened persons are most wisely and beneficially appointed the constitutional guardians of the public health; and we feel it a happiness to unite with them in our endeavours to mitigate the pains of disease; to convey consolation and hope into the chambers of anxiety and alarm; and to avert or alleviate that stroke which rends asunder all human attachments, by disuniting the conscious and immortal part of man from the world of matter, and transferring it to the world of spirits." 93.

The following passage will afford a specimen of Mr. Chevalier's command of language as well as of vivid ideas.

"But it is not enough that we advert to the benefits derived from

surgery, in the comparatively tranquil and measured course of civil life ; we must not forget what it has accomplished in other and more turbulent scenes. We must turn to those seas and fields, and mantling walls, over which the thunder of the murderous cannon has roared ; where fire and sword have met in awful conjunction, to support or to oppose unrelenting ambition ; and where the loaded engines of war have vomited forth instant death and mutilation upon thousands and tens of thousands. How many lives have been preserved ; how many days and nights of agony and torment have been prevented ; what solace and consolation have been afforded in the slow and gloomy hours of anguish and suspense, by the firm and faithful hand which surgery has been enabled to stretch forth to the relief of the suffering brave ! Sudden, arduous, and complicated, are often the duties, which a naval or a military surgeon is called to perform.

> Hic illi occurrit Tydeus ; hic inclitus armis
> Parthenopœus, et Adrasti pallentis imago—

but well have those duties been sustained. The tried skill and humanity of our surgeons have been associated with the military glory of their country, and have divested the day of battle of half its horrors." 95.

The orator passes a high and well-merited eulogium on the character of the late, and distinguished talents of the present, President of the Royal Society ; and concludes with an emphatic address to the rising generation of medical students, in which he repels the idea that our profession can have any natural tendency towards scepticism and irreligion.

" Who," says he, " can seriously contemplate the numberless operations of the principle of life, all infallibly producing their several and peculiar results, in all the different tribes of the animal and vegetable worlds—who can behold the powers with which the human body is endowed, to repair its injuries, and to relieve its diseases, as far as the destinies of our nature will permit—who can survey the demonstrations of those facts which are contained in that matchless museum, and not be compelled to unite in the glowing language of our immortal bard—

> " These are thy glorious works, Parent of Good,
> " Almighty ! thine this universal frame,
> " Thus wondrous fair !" 107.

Some communications which the Editor has lately received have suggested the idea of his defraying, at his own expense, eight pages of closely printed letter-press, in the *Extra Limites* department of each future number of the Journal, as a bonus to the public, and a vehicle for ingenious remarks, suggestions, strictures on doctrines, practices, modes of conduct, &c. &c. in books or men, couched in

general terms, and carefully devoid of personalities. These communications must be anonymous, at least to the public, and may extend from a few lines to a page; but not beyond that, if possible, lest they should abridge the variety which this department is expected to produce. It is considered that a medical Argus, keeping a watchful eye on the interests and respectability of the profession, and legitimately criticising, in general terms, such deviations from the line of rectitude, propriety, truth, sound science, and morality, as may occur in men or books, must exert a very salutary influence, especially if dignity of expression and good humour be observed.

As this department is entirely at the private expense of the superintending Editor, it is requested that communications may be *post paid*, and sent as early in the quarter as possible. After the tenth of the month preceding publication day, they will be too late for that number of the Journal.

N. B. All appeals and defences of authors must be paid for, as usual, in the Extra Limites department.

The following letter was lately received, bearing the postmark of a large town in the country; and as it contains observations which we deem to be deserving of attention, we shall give it place by way of opening the eyes of Argus, for the first time, to the wonderful scene of human life around him.

XVII.

EXTRA LIMITES.

ARGUS, No. I.

Centum luminibus cinctum caput Argus habebat,
Inque suis vicibus capiebant bina quietem,
Cætera servabant.

To the Editors of the Medico-Chirurgical Review.

Gentlemen,

At page 787 of your fourth number, you have introduced an extract from an oration pronounced by Professor Richerand of Paris, in which he draws a humiliating picture of the Profession in his own country, "in consequence of the medical market being overstocked." In the succeeding page, Gentlemen, you seem to think that M. Richerand's observations will not apply to Great Britain; but probably were you to witness the measures pursued by competitors for medical celebrity in the *country*, you would alter your opinions. In the metropolis, indeed, the *odium medicum* is

less observable, because the interests of individuals do not so immediately clash, and because the great mass of talent diffused through such a boundless capital, preserves a degree of equilibrium that drowns, in a great measure, those personal conflicts that disgrace medical society on more circumscribed theatres of action. In the metropolis too, a physician or a surgeon seldom attains eminence without securing the esteem of his *professional* brethren by upright conduct as well as scientific acquirements; and hence he *there* finds it his interest (sooner or later) as well as duty, to act in conformity with the dictates of honour and liberality. But in the country it is very different, and too many medical practitioners make it their sole line of policy to ingratiate themselves with the public and their patients at the expense of their cotemporaries in the same profession. When a gentleman starts upon this plan, and has the means of enlisting a few non-professional gossips in his service, the scenes that ensue are really disgusting to a philosophic observer, and derogatory from the dignity which *ought* to attach to human nature.

If the theatre of this farce happen to be a place of fashionable resort, the first engine of medical manœuvring is a dashing equipage—not the fair and natural result of a gradual and progressively increasing *practice*, but the *coup-de-main*, to storm the citadel of public opinion, or the *royal road* to reputation, without the toilsome process of advancing step by step, in patient investigation, attentive observation, and laborious discharge of painful, and often unrequited duties. This piece of policy, however, would be pardonable, or rather *pitiable*—for the bubble sooner or later bursts; but the same actuating principle prompts to other and less excusable measures. The feelings and the credulity of the afflicted are tampered with, imposed upon, and turned into engines subversive of fairly earned reputation in others, or subservient to the establishment of fungous reputation for themselves. It is apparently in vain that the medical community see and feel this disingenuous and unprincipled mode of conduct in some of their brethren. Their voice is disregarded by the actor, or artfully represented as the effusion of envious or jealous feeling towards rising talent and merit. What then is to be done? Are we to silently look on and see ourselves undermined and ruined; or must we adopt the same weapons in our own defence, and thus degrade a noble and venerable science, in the eyes of the world? This, Gentlemen, is the question I would ask; and this is my motive for appealing to the general tribunal of the Profession.

I am, with much respect,

Your constant Reader,

A Country Physician.

☞We apprehend the evil complained of exists to a great extent, but we would recommend a stern and inflexible perseverance in the path of *honest assiduity*, as the surest road, in the long run, to honourable distinction. EDITORS.

ARGUS, No. 2.

OBSTINATE PERVIGLIUM.

A medical gentleman, between forty and fifty years of age, residing in the West Indies, has been twice affected with states of obstinate insomnolency, the first lasting from six weeks to two months, the last attack continuing nearly three months, without a wink of sleep. These sleepless fits come on without any preceding indisposition, of any kind, the gentleman being in perfect health. For the first week or two he feels little inconvenience; goes out to parties, and spends the nights in amusements; but after this period, a train of nervous symptoms succeeds, attended with excessive irritability, and derangements in the vascular system and secreting organs. Every means which the medical men of the island could suggest proved entirely useless, and the pervigilium went off as suddenly as it came on, without any manifest cause, and leaving the gentleman in his usual state of health. The second attack lasted so long that himself and friends became alarmed for the consequences, and after being nearly three months without a moment of sleep, he embarked in the packet for England to obtain medical advice. The packet put to sea in the evening, and the gentleman fell fast asleep, and continued so twelve hours, since which (six or eight months) he has his usual rest, and is in good health. This gentleman has been seen by several physicians in London, none of whom could discover any symptom of organic or other disease to account for the two attacks above mentioned. He is desirous of obtaining opinions on his case, and of learning whether any gentleman has met with any thing similar in his practice.

ARGUS, No. 3.

The Surreptitious Knight: or, *Sir Charlatan Glanderman.*

Sir, *Blackheath, 15th May,* 1821.

As Editor of the Medico-Chirurgical Review, I conceive it to be your duty, as well as inclination, to expose the various systems of quackery resorted to in the Metropolis, from the well-known Dr. Eady, of Privy Wall notoriety, up to the equally celebrated prognosticator of a Shiloh, and his honourable and literary friend Sir ——————*

I shall not therefore waste either my time or paper in apologizing for endeavouring to give you some idea of the claims which the last-mentioned worthy has to the *distinction* he enjoys. To disclose to you his *particular merits*, and the manner in which I was so unfortunate as to become acquainted with them, is the object of my present letter. In the first place it will be necessary to inform you, that I am not one of the profession, which will be some excuse for my ignorance; in the next, that an inclination of literature

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* *We have suppressed the name of the Gentleman (if such a disgrace to the Profession deserves that appellation) who forms the subject of Argus's glance in this paper.*

which prompts me to read every thing which comes in my way, was the means of introducing me to the acquaintance of Sir ———. Turning over the pages of the ——— for ——— last, my attention was arrested by a short review of a work professing to be written by Mr. ———, on ——— ———, &c. Being of a scrofulous habit, I was induced to peruse this review, with its accompanying parts of the work, in which cases were cited to have been cured of a most extraordinary and desperate kind, by his peculiar treatment. Little suspecting that the conductors of a respectable periodical publication would let their pages out to hire to any advertising Charlatan, I was silly and credulous enough to determine upon waiting on the *Author*, for the purpose of submitting my case to his attention. I accordingly waited on him, and told him whence my visit originated; and that I found what he had observed in his work with regard to the tendency of mercury in my disorder, was perfectly correct.—"Yes," he replied, "IT IRRITATE THE SYSTEM:" and immediately he entered into a long tirade against mercury and its general use by the profession as a universal panacea. His intention was evidently to astonish me, and so he did—for judge of my surprise at finding our author setting all the rules of syntax at defiance; in short, Sir, without being a critic, I perceived that amid his numerous cases, that of the nominative came least under his attention. I was the more astonished at seeing the table covered with classic authors, and the room surrounded with models of arms, legs, feet, &c. all tending to impress the poor patient with the idea of a cognoscenti.

Not to intrude too much on your time, he gave me some medicine, desired me to call again in a fortnight, and assured me that I had only to persevere in taking his medicines to effect a permanent cure. At the same time he put a card into my hand, which I have lost, but which I believe was as follows:— "Mr. ———, Surgeon, Accoucheur, ——— House, ——— Square. C———r, S———a, and Diseases of the Breast, particularly attended to." I called the same morning on a friend who resides in town, to whom I related what had passed, adding my conviction that he must have employed some Grub-Street hack to write the pamphlet for him. My friend observed, "that he never heard any thing respecting Mr. ——, but that he was sufficiently convinced of his celebrity from his card, as no regularly bred practitioner would resort to such means for attracting public notice; I would recommend you to throw away his medicine, and to congratulate yourself on getting so cheaply out of his hands." Unfortunately I neglected my friend's recommendation, and the result will be best explained by the subjoined correspondence, in which I have taken particular pains to preserve the original orthography of Sir ———.

From Mr. ———, accompanied by a bill of great length.

"DEAR SIR,

I have *send* you some more *altrertive* powders, and hope they are of service—Next week I may probably encrease the power of what you are taken—I send you the account as it stands.

Your's truly, ———."

To Mr. ———, in reply to the above.

"SIR,

I cannot find words to express the astonishment which I felt yesterday morning at the receipt of your bill, amounting to seven pounds eight shillings and sixpence. I applied to you for advice, as I informed you on my first visit, in consequence of having seen in a respectable periodical publication a favourable review of a work on ——— diseases, *purporting to be written*

by you. I was more particularly induced to consult you from seeing the respectable name of Mr. Astley Cooper adduced, as having witnessed a cure which you performed, and which his well-known skill had failed to effect. As a total stranger to you I thought proper, on my first visit, to ask how much I was indebted to you; you replied "you may leave a pound," which I did; I left another on my next visit, and my purse underwent the same pull on the fourth of October, when I last *had the pleasure of seeing you,* and in so doing I considered that I had settled *all claims up to that period.* Could I have supposed for a moment that I was to pay at the rate of sixteen shillings and sixpence per bottle, from that moment I should have discontinued my visits, as neither my purse nor my inclination would have suffered me to take cordials so expensive. Five shillings I considered would be the utmost you could possibly charge. Experience, however, makes even wise men wiser; and this expensive lesson will, in future, prevent me from setting limits to that which is illimitable—the exorbitant conscience of an apothecary.* Why, Sir, you really surpass the utmost skill of the ancients, who sought to transmute baser metals into gold; your flights are far more daringly elevated, and your success is hand in hand with your ambition, when you succeed in extracting that precious ore from a trifling discolouration of the simple element.

It was your business to have apprised me of the inadequacy of my reward in the first instance, when I should immediately have supplied the deficiency, and have discontinued my visits, and not have been mortified and insulted by a preposterous bill sent in without any preparation on my part for its receipt. My income does not amount to more than six shillings per day, and I appeal to yourself whether in common prudence I could have been so egregiously stupid as to swallow more than half that amount in about a quarter of a pint of medicine. As you took upon yourself to send in the bill, you might, in common delicacy, have kept back the last bottle, more particularly after a week's delay. This is the first time in my life that I ever felt the least reluctance in discharging a bill; on the contrary, I have ever derived more pleasure in defraying than in contracting an account; and had the amount of yours been at all reasonable, I should have paid it without hesitation. You, however, well know that it is not reasonable, and to my sorrow I am sufficiently acquainted with the routine of medical practice, to be aware that three shillings per dozen for powders is a very ample remuneration, *when there is no attendance.* In your bill you charge me for powders four pounds and upwards, which I will not pay but "on compulsion," as I deem it more honourable to resist, than to submit to, an unjust demand. Rather, however, than be involved in legal squabbles, I will immediately transmit you three pounds in addition to what I have already paid you, provided that you send me a receipt in full of your demand. Awaiting your reply,

I am, &c.

Letter in reply to the above, in which Sir Charlatan endeavours to be facetious.

"7th Nov. 1820.

"Sir,

Had you thought correctly, (and I am not answerable for your thinking wrong,) or even shown my account to any respectable medical

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* *The victim of the unprincipled Charlatan exposed in this letter should not identify the impositions of a quack with the proper charges of an apothecary.* Editor.

man, he would have informed you my charges are as common as they are just. You *can not* therefore have added "wisdom to the wise" as you are perfectly ignorant of what you talk of. Of your *limitted* income I have *nothing to do it*, and I assure you I have been too long established and I hope too respectably situated than to wish to impose on any one and I can not have wounded your delicacy as the tenour of your letter satisfies me on that head.

I am, Sir, ————."

This note is so much better expressed than either of his former ones, that I feel assured that it was dictated for him, and that his time was too much occupied to enable him to *copy* it correctly. Be this as it may, being informed that as medical charges were, for the most part, arbitrary, the law would compel me to pay, not only the bill, but all other expenses; under these circumstances my poverty, rather than my will, prompted me to send him the note which follows.

"To Mr. ————."

"Sir,

I have supplied the bearer with the amount of your bill, and without entering into any further controversy, *I leave it to your sense of justice*, either to take the whole amount, or to make that deduction which a candid consideration must necessarily dictate. I reiterate all my *former* assertions, and am, Sir, &c."

It will be readily imagined that my appeal was to a nonentity. Thus ended a correspondence, which discovers that the lottery contractors do not engross the whole of the puffing system, and that education is not essential to knighthood. To the many ornaments of the profession, who have hitherto contributed to render the honour respectable, I fear the name of Sir Charlatan will be considered rather as an addition than an improvement to the order. You are of course at liberty to make what use you please of this communication, and by intimating a wish to that effect, I will readily supply you with the Knight's original letters. The galled jade will naturally wince, but I assure you I am induced to address you, more from a desire of pushing presumptuous ignorance from her throne of brazen impudence, than from any vindictive feeling toward the contemptible individual who equally disgraces knighthood and the Faculty. I am, Sir, with great respect,

M————."

☞ We have thought it our bounden duty to give insertion to the above letter, in order that our readers may show it to such of their neighbours as may have been equally duped by the above or any other of the numerous quacks which infest this metropolis. At the same time we cannot commiserate men of such sense and education as M. evidently is, when they run headlong into the jaws of Charlatanism, and thus place that confidence in ignorance and impudence which they refuse to talents and candour. Editors.

CORRESPONDENCE.

We duly received the two pamphlets, with the unknown author's letter, dated, March 1, 1821. The subject will probably be taken into consideration at no distant period. Meanwhile the unknown writer is requested to accept the tender of our professional respect and esteem.

Junius's critique came to hand, and though we are compelled to acknowledge that most of the censures are just, yet they are too severe for a journal devoted to a science that ought to humanize the soul, subdue the angry passions, and harmonize the members of the profession. Junius must surely have seen that this has long been our object, and we are sorry that the caustic passages and general tenor of the critique disable us from making use of it. Had judgment been tempered with mercy, and all personal allusions avoided, we should have been happy to avail ourselves of the analytical and other critical portions of the paper. If Junius will commission any friend to call for the critique, stating in writing the motto, as voucher, it shall be returned.

SCRIBLOMANIA.

In consequence of *Philo-Criticus's* letter, we have glanced over the productions to which he alludes, and find them to be mere compilations from the most common authorities, and indicative of no great talent in the authors, who appear, indeed, to have had little or no personal experience of the subjects on which they have undertaken to write. As some books must necessarily pass unnoticed, we think it best to leave those on one side which can yield nothing valuable to the public by the process of reviewing. Even with such precaution, this Journal has sometimes difficult and complicated functions to perform in its laboratory. Often has it recourse to the literary *pestle and mortar*, for the purpose of breaking down the crude materials preparatory to the *sifting* process. The alembic or retort is constantly at work to separate the *spirit* from the *caput mortuum* of medical productions. *Evaporation* also we find a very convenient process, where authors have dissolved their materials in such excessive quantities of verbal menstrua, (probably with the view of imitating certain mineral springs whose virtues depend on the diffusion of a small proportion of salts through a great volume of water,) that it requires considerable *tact* as well as *taste* to ascertain what is the impregnating ingredient. It not seldom happens, however, that we are able to arrive at our object by a much nearer route than evaporation—namely, by *precipitation*. A modicum of critical acumen, nay, of common sense, will frequently throw down at once the active principle from an immense infusion or solution; and we are thus enabled to present our readers with the *emetia or morphium* of an octavo, in a space not much exceeding that in which Hannibal carried his last anodyne draught. We need not dwell on the obvious and necessary processes of literary filtration, clarification, despumation, sublimation, digestion, extraction, &c. to which

we have daily recourse ; but we think it proper, for the honour of the profession, not to descend to those low *culinary* operations, of *pickling, peppering, roasting, and basting*, which some of our medical *critics* have introduced, for the purpose of exciting depraved appetites. At the same time we are free to confess that several *authors* have lately set literary *fare* before the public, which almost sanctions the use of those *sauces* and other *provocatives* held forth for sale by the critical cooks. To us, however, it appears the wisest plan, as well as the most dignified, to make *silence* censure. Nor can we approve of the *barbarous* practice pursued by some modern critics, (which smacks strongly of the *chirurgo-tonsorial* age) namely, that of *shaving* authors, with razors, too, which Neptune's barber-general would be ashamed to apply to the face of any customer on crossing the line. Indeed, from the literary food which *some* authors and *some* critics venture to bring into the market, these venders must look upon the public customers as belonging to that species of *simple* animals which consists in a *stomach* only, and consequently, which cannot be supposed to be very delicate in their appetites. It must be confessed, however, that in this age of literary epicures the most fastidious stomach may find provender to its taste—in the ample range extending from the ponderous monograph that embraces but a single topic, to the slender coup d'œil, that gives us, at one glance, the quintessence of all things that exist in the heavens above, the earth beneath, or the waters under the earth. We think, therefore, that PHILO-CRITICUS has no reason to complain of the want of GENIUS in the medical writers of the present day. For our own parts, we are often amazed at the extent of their ingenuity! It has been said, that "*ex nihilo nihil fit.*" We deny it. A whole volume may easily be generated now *ex nihilo*, and that of such dainty workmanship that it may be fit to —"set before a king," and *honourably* rewarded with knighthood for its *manu*facturer.*

Extract of a Letter from Dr. Dickson.

"As to the remarks of the Editor of the Intelligencer on my case of erysipelas, to say the best of them, they are founded on error ; for were I as willing to find fault as he seems to be, I could point out three mistakes in as many lines. The patient did *not* require bleeding at my visit of the 26th : for the symptoms of the inflammation of the brain did not supervene until the night afterward : from that period the disease was treated with equal vigour and success, and therefore your opinion was perfectly correct. With regard to my ordering ʒvi. of blood to be taken on the 25th, the case expressly states the 25th to have been "the day before I saw him." Such criticism is unworthy of any reply."

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* It is highly probable that Dr. EADY, of *parietal* celebrity, will soon receive the order of knighthood (*night*-hood) for his ingenious invention of *nocturnal lithography*, as a substitute for *literary* or professional fame. We understand also, that Dr. (soon *Sir Richard*,) Reece is about to present, at the next Levee, a superb copy of his "RECEAN PANDECT OF MEDICINE," published a few years ago, and now to be embellished with a highly finished portrait of Joanna Southcott, in a most interesting *parturient* posture, the Doctor himself in attendance to receive the first fruits of Joanna, and *gazette the health* of the long-promised Shiloh.

BIBLIOGRAPHICAL RECORD.

Books Received for Review since March 1st, 1821.

1. A Dissertation on the Treatment of Morbid Local Affections of Nerves: to which the Jacksonian Prize was adjudged by the Royal College of Surgeons. By Joseph Swan, Member of the Royal College of Surgeons, and Surgeon to the Lincoln County Hospital. One vol. 8vo. pp. 196, with a coloured plate of the nerves of the face. London, 1820.

☞ *See page* 63.

2. An Account of a new Method of making dried Anatomical Preparations. By Joseph Swan, Member of the Royal College of Surgeons, and Surgeon to the Lincoln County Hospital. Second Edition, enlarged. One vol. 8vo. pp. 132. London, 1820.

3. A Treatise on the Art of Cupping: in which the History of that operation is traced: the Complaints in which it is useful indicated, and the most approved method of performing it described. By Thomas Mapleson, Cupper to His Majesty. *Second Edition*, considerably improved. One vol. duodecimo, pp. 96. Callow, 1821.

☞ *The author of this useful little work has long been known as one of the most expert cuppers in this metropolis—an expertness which we have often personally witnessed. From the now increasing attention to* local *blood-letting we can recommend this little volume to our brethren, though that is hardly necessary, since its merits are already appreciated by the public, as evinced by a new edition.*

4. A Monthly Journal of Popular Medicine, explaining the Nature, Causes, and Prevention of Disease, the immediate Management of Accidents, and the Means of preserving Health. Conducted by Charles Thomas Haden, Surgeon to the Chelsea and Bromton Dispensary, &c. No. 1, for March, No. 2, for April, and No. 3, for May, 1821. Octavo, 48 pages each number.

5. Practical Observations on the Use of Oxygen or Vital Air, in the Cure of Diseases: to which are added, a few Experiments on the Vegetation of Plants, illustrated with five engravings. By Daniel Hill, M.D. Surgeon, Honorary Member of the Medical Society at Guy's Hospital, and Fellow of the Horticultural Society. *Second Edition, with an Appendix.* One vol. 8vo. pp. 102. London, 1821.

6. Discours sur le prééminence du Systême nerveux dans l'economie animale, et l'importance d'une étude approfondie de ce systême ; prononcé par JEAN FREDERIC LOBSTEIN, Professeur D'Anatomic Pathologique, et Directeur du Museum de Strasbourg. Strasbourg, 1821. *De la part de M. Breschet.*

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7. Bulletins de la Faculté de Medecine de Paris. Paris, No. X. 1820. *De la part de M. Breschet.*

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8. REVUE MEDICALE, HISTORIQUE et PHILOSOPHIQUE. Tome Quatrieme—February, 1821, containing Moreau de Jonnes on the Yellow Fever—Duval on the Teeth—Montegre on Hæmorrhoids —Lallemand and Rostan on Softening of the Brain—St. Laurens on Gastric Erysipelas—Bulletins of the Medical Society of Emulation, &c. &c.

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9. A Letter addressed to the Legislature on Vaccination. By J. TAYLOR, M. D. Physician Extraordinary to his Royal Highness the Duke of Clarence. Octovo, sewed, pp. 16. London, 1821.

☞ *A zealous appeal to Parliament in favour of an investigation into the late supposed failures of vaccination, in order that public confidence may be restored, and the spread of the variolous pest restrained.*

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10. A descriptive Catalogue of the British Specimens deposited in the Geological Collection of the Royal Institution. One vol. 8vo. pp. 212. By Professor W. T. Brande.

☞ *The collection of which this valuable volume exhibits a descriptive catalogue, was commenced several years ago by the present distinguished president of the Royal Society, and has since been increased and rendered much more complete by the able and indefatigable gentleman who now fills Sir H. Davy's former chair, at the Royal Institution.*

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11. The History of the Small-Pox. By JAMES MOORE, Member of the Royal College of Surgeons, London, Director of the National Vaccine Estoblishment, &c. &c. One vol. 8vo, pp. 312, with a plate.

☞ *This is the most valuable and erudite history of small-pox, its treatment, and counteraction, which we possess.*

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12. Reports of the pestilential Disorder of Andalusia, which appeared at Cadiz, in the years 1800, 1804, 1810, and 1813 ; with a detailed Account of the fatal Epidemic, as it prevailed at Gibraltar, during the autumnal months of 1804 ; also Observations on the remitting and intermitting Fever, made in the Military Hospitals at Colchester, after the return of the troops from the expedi-

tion to Zealand in 1809. By Sir JAMES FELLOWES, M.D. Fellow of Caius and Gonville College, Cambridge; Fellow of the Royal College of Physicians, Lond. &c. &c. &c. One vol. 8vo. pp. 484.

☞ *This is one of those interesting volumes which have resulted from the experience of our medical officers during the late war. We have given a full review of it in a former series of this Jouanal.*

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13. A comprehensive Treatise upon the Symptoms, Consequences, Nature, and Treatment of Venereal or Syphilitic Diseases. Translated from the seventh French edition of F. SWEDIAUR, M.D. Two volumes in one, pp. 860. London, 1819.

☞ *This is by far the most complete treatise on the venereal disease in the English language, and ought to form a class book for the young practitioner, on entering on the duties of his profession. In a future number we hope to take more particular notice of the work.*

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14. Observations on Sulphureous Fumigations, as a powerful Remedy in Rheumatism and Diseases of the Skin. By WILLIAM WALLACE, M. R. I. A. Member of the Royal College of Surgeons in Ireland; one of the Surgeons to the Charitable Infirmary; Surgeon to the Dublin Infirmary for curing Diseases of the Skin; Lecturer on Anatomy and Surgery, &c. One vol. 8vo. pp. 92. Dublin and London, 1821.

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15. An Inquiry into the Nature and Treatment of Gravel, Calculus, and other Diseases connected with a deranged Operation of the Urinary Organs. By WILLIAM PROUT, M.D. F.R.S. Octavo, pp. 227. London, 1821.

☞ *See page* 89.

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16. Practical Observations on Fever, Dysentery, and Liver Complaints, as they occur among the European Troops in India: with Introductory Remarks, &c. &c. &c. By G. BALLINGALL, M.D. F.R.S.E. Fellow of the Royal College of Surgeons, Edinburgh, and formerly Surgeon of H. M. 32d Regiment. Octavo, pp. 250.

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17. A Manual of the Diseases of the Human Eye, intended for surgeons commencing practice; from the best national and foreign works, in particular those of Professor Beer: with the Observations of the Editor, Dr. Charles H. Weller. Berlin, 1819. Translated from the original German Work, and illustrated with Cases and Observations. By GEORGE C. MONTEATH, M.D. Member of the Royal College of Surgeons of London, Member of the Faculty of Physicians and Surgeons of Glasgow, and one of the Senior Surgeons to the Glasgow Royal Infirmary, &c. &c. Two volumes, 8vo. pp. 600, with five plates, and 37 beautifully coloured figures —nine representations of instruments. Glasgow. 1821.

☞ *The four following American Works have been received through the hands of our esteemed transatlantic friend and correspondent—Dr. Birckhead of Baltimore, viz.*

18. An Historical and Physical Sketch of a Malignant Epidemic, prevalent in Maryland, and some other States, within the last few years, &c. &c. By T. K. Wright, of Baltimore, 8vo. pp. 168.

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19. Transactions of the Physico-Medical Society of New-York, Vol. I. 8vo. pp. 446.

☞ *The contents of this interesting volume shall be made extensively known to the Profession, through the medium of this Review, as soon as possible.*

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20. A Memoir on Contagion, more especially as it respects the Yellow Fever, read before the Medical and Chirurgical Faculty of Maryland. By Nathaniel Potter, M. D. &c. &c. Octavo, pp. 117.

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21. A Treatise on Febrile Diseases, &c. By A. P. W. Philip, M. D. &c. &c. With *Notes and Additions*, by Nathan Smith, M. D. Professor of Physic, Surgery, and Obstetrics, in Yale College. Two volumes, 8vo.

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22. An Inquiry into the Nature and Treatment of Gravel, Calculus, and other Diseases connected with a deranged Operation of the Urinary Organs. By William Prout, M. D. F. R. S. 8vo. pp. 227. Baldwin and Co. London, 1821.

☞ *See page 89 of the present Number.*

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23. Practical Observations on those Disorders of the Liver, and other Organs of Digestion, which produce the several forms and varieties of the Bilious Complaint. By Joseph Ayre, M. D. Physician to the General Infirmary, and to the Lying-in Charity, at Hull; and Senior Physician to the Hull and Sculcoates Dispensary. *Second Edition*, altered and enlarged, of the Essay on Marasmus. Octavo, pp. 270. Baldwin, London, 1821.

☞ *In the first volume of our Quarterly Series, p. 399, et. seq. we gave a very full and comprehensive analysis of Dr. Ayre's valuable Treatise, which we strongly recommended to the Profession, predicting "that the work would be widely circulated and favourably received by the medical world." Our prediction has been verified, and we have only to say that this new edition is considerably improved, and the matter more concentrated than in the first edition.*

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24. A Practical Treatise on the Inflammatory, Organic, and Sympathetic Diseases of the Heart; and also on Malformations of the Heart, Aneurism of the Aorta, Pulsation in Epigastric, &c. &c.

By Henry Reeder, M. D. Member of the Medical and Chirurgical Society of London, and Extraordinary Member of the Royal Medical Society of Edinburgh. One vol. octavo, pp. 276. London, 1821.

25. A Treatise on Indigestion and its Consequences, called Nervous and Bilious Complaints; with Observations on the Organic Diseases in which they sometimes terminate. By A. P. W. Philip, M. D. F. R. S. Ed. &c. One vol. 8vo. pp. 364. Underwood, 1821.

26. A Sketch of the History and Cure of Febrile Diseases; more particularly as they appear in the West Indies, among the Soldiers of the British Army. By Robert Jackson, M.D. *Second Edition, with many additions.* Two vol. 8vo. pp. 880. London, 1820.

☞ *The first edition was published in* 1817. *The present is published—"because the author is desirous, before he may go hence, to leave the sum of what he has observed on the subject in a form that is intelligible and as easy to be understood as he is able to make it."* Pref. *The matter indeed of these two volumes offers a most astonishing fund of information on the subject of fever, and no tropical visiter, in particular, should proceed to his destination without possessing the work. The European physician too, will find that the veteran Jackson has anticipated almost every modern writer on fever, on all those points of pathology and practice in which we excel our forefathers. We hope soon to present our readers with an analytical view of the present work.*

27. Practical Observations on the Use of the Cubebs, or Java Pepper, in the Cure of Gonorrhœa, with Cases. By Henry Jeffreys, Esq. Senior Surgeon of the St.George's and St. James's General Dispensary; Assistant Surgeon to the Lock Hospital; and formerly a Surgeon in the Third Regiment of Guards. One vol. 8vo. pp. 68. London, 1821.

28. Reports of the Carlisle Dispensary, for the Year 1817, 1818, 1819, 1820. Medical Officers, Dr. John Heysham, Dr. Thomas Barnes, Dr. Thomas Blaniere, Mr. James Anderson.

☞ *We have been much pleased with these Reports, which do honour to the heads and hearts of the Medical Committee.*

29. Observations on the Varioloid Disease, or on Small Pox, under the form which it presents in persons previously vaccinated; illustrated by Cases and Experiments, published with a view to a true estimate of the value of vaccination. By William Stoker, M. D. Licentiate of the College, and Member of the Association of the King's and Queen's College of Physicians in Ireland; Physician to the Fever Hospital, &c. &c.&c. Octavo, sewed, pp. 68. Dublin, 1821.

30. An Address to the Public on Vaccination, &c. By B. Granger, Surgeon. Octavo, sewed, pp. 34. Burton-on-Trent, 1821.

ANNUNCIATIONS.

Mr. Lloyd, Senior Surgeon to the General Dispensary, Aldersgate-Street, has in the press a Treatise on Scrofula, to which the Jacksonian Prize was adjudged.

The tenth number of the Quarterly Journal of Foreign Medicine and Surgery will be published on the 1st of June, 1821.

A third edition of Mr. Stowe's Toxicological Chart is just published.

College Lectures, Warwick Lane.

On the 2d, 4th, and 9th of May, Dr. Park lectured on the Theory and Phenomena of Fever. On the 11th, 16th, and 18th of May, Dr. Cooke on Epilepsy. On the 23d, 25th, and 30th of May, Dr. Powel delivered the Lumleian Lectures; and on the 1st, 6th, 8th, and 13th of June, Dr. Paris will give Lectures on the Collection of Materia Medica.

At the College of Surgeons Messrs. Wilson and Brodie are lecturing—the former on the Urinary and Genital Organs—the latter on Comparative Anatomy.

A second edition (Italian) of Professor Scarpa's Work on Hernia has lately been published, enlarged by the introduction of many important anatomical and pathological observations, as well as practical rules in surgery, drawn from the experience of himself and others. It is printed distinct from the plates, and at a low price.

Dr. Forbes, of Penzance, has nearly ready for publication a *condensed* translation of Lannæc's work on Diseases of the Chest, which will be enriched with notes and illustrations by the translator.

THEATRE OF ANATOMY, MEDICINE, &c.

Blenheim-Street, Great Marlborough-Street.

The Summer Course of Lectures, at this School, will begin on the following days:—

Anatomy, Physiology, and Surgery, by Joshua Brookes, F. R. S. daily, at Seven in the Morning, on Friday, June 6th.—Dissections as usual.

Chymistry, Materia Medica, &c. daily, at Eight in the Morning; Theory and Practice of Physic, at Nine, with Examinations, by Dr. Ager, on Monday, June 4th.

Three Courses are given every year, each occupying nearly four months.—Further particulars may be known of Mr. Brookes, at the Theatre; or of Dr. Ager, 69 Margaret-street, Cavendish-square.

MEDICAL PUPIL.

Dr. James Johnson will admit into his family on the 1st of October next, for one or more years, a young gentlemen pursuing his professional studies in London. The terms, which are moderate. may be known by application to Dr. J.

☞ *M. is requested to transmit the documents.*

J. V. SEAMAN, NEW-YORK,

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PARR'S MEDICAL DICTIONARY.

The London Medical Dictionary; including, under distinc heads, every branch of Medicine, viz. Anatomy, Physiology, and Pathology, the Practice of Medicine and Surgery, Therapeutics and Materia Medica, Chymistry, Natural History, &c. &c. By Bartholomew Parr, M. D. &c. &c., 2 Vols. 4to: with numerous elegant plates.

HOOPER'S MEDICAL DICTIONARY.

Lexicon Medicum, or Medical Dictionary; containing an explanation of the Terms in Anatomy, Physiology, Practice of Physic, Materia Medica, Chymistry, Pharmacy, Surgery, Midwifery, &c. &c. By Robert Hooper, M.D. F.L.S. &c.&c. From the 4th London Edition, 8vo.

The Edinburgh Medical and Surgical Journal; exhibiting a Concise View of the latest and most important Discoveries in Medicine, Surgery, and Pharmacy. Complete from the commencement in 16 Vols. 8vo. bound price $60.—Illustrated with numerous engravings.

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THE

Medico-Chirurgical Review,

AND

JOURNAL OF MEDICAL SCIENCE.

(Analytical Series.)

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

VOL. II.] SEPTEMBER 1, 1821. [No. 6.

I.

BARON LARREY'S RUSSIAN CAMPAIGN.

Memoires de Chirurgie Militaire, et Campagnes du Baron D. J. Larrey, Chirurgien en Chef, &c. i. e. *Memoirs of Military Surgery and Campaigns.* By BARON LARREY, Surgeon in Chief, &c. &c. &c. Vol. iv. pp. 600, with numerous Plates. Paris, 1817.

"Eo adductus sum ut multis meorum æqualium hinc indè errantibus viam monstrarem et aliquantulum munirem." *Baglivi.*

THE Gallo-Russian Campaign of 1812 is the most memorable event, political, moral, or military, of the age in which we live. The Roman Empire fell by a series of declensions, occupying many centuries; and consequently its domination faded away by almost imperceptible degrees. But the colossal power of France burst by its own plethoric strength, and its tottering fragments crumbled into dust in the short space of a few months, overwhelmed by famine and fire;—by the elements of Nature, and the sword of the enemy! During this desperate and disastrous expedition, there were many indications (as will presently be shown) of the finger of Providence, which left prophetic impressions on some of the most *philosophic* hearts accompanying the enterprise; and the moral lesson which it has bequeathed to the world will probably operate and be quoted, till the latest posterity. In a medical point of view, the Russian campaign is extremely interesting, and the valuable experience which it yielded to surgery in particular, has, as yet, been withheld from the great body of the British profession.

As it is highly improbable that the volume before us shall ever be translated into our language, we shall possibly be excused for dedicating a moderate space to its analysis, even if it should somewhat exceed that usually allotted to works of equal size, published in this country.

Baron Larrey is an interesting writer, and often digresses, from strictly professional subjects, to paint the eventful scenes around him. He must, indeed, be more or less than man, who could act the stoic on such occasions, or pass unnoticed the tremendous conflicts, and all the multiplied horrors of war, with its attendant train of "plague, pestilence, and famine."

Sunt lachrymæ rerum et mentem mortalia tangunt!

Although we have read with intense interest the Baron's detail of medical and military operations and movements during the advance and retreat of the French army, yet we dare not indulge in more than a most rapid sketch of this portion of the volume, which occupies a space of nearly two hundred pages. We are disposed to hope that few of our readers will wish that the sketch which we are about to lay before them had been omitted, or much curtailed.

Such an effective army as perhaps the world never before produced, consisting of 400,000 men, infantry and cavalry, with Napoleon and nearly all his generals at their head, presented themselves on the banks of the Vistula, in May 1812. This torrent of warriors proceeded from the Vistula to the Niemen, without interruption, crossing the latter river, and directing their march from thence to Wilna, the capital of

the external and internal orifices of the wound were far from being parallel, the surgeon had applied adhesive plasters, and closed the external opening. The air constantly escaping from the lungs, had therefore distended the whole cellular tissue of the body. The Baron tore off the dressings, cleared the wound of all transverse filaments or frænula (bridles) and thus rendered the openings in the pleura and integuments parallel.* Cupping glasses were applied over the wound, which were quickly filled with air and blood. The lips of the wound were then brought together, and maintained by proper bandages. Cupping glasses and scarificators were next applied successively over all parts of the body to which they could have access; and where they could not, incisions were made with the knife. By this treatment the officer was snatched from the jaws of death, and ultimately recovered perfectly."

Before marching from Wilna, Napoleon ordered a grand review of his army, at which Baron Larrey was present, with all his medical staff and ambulances. The air was hot and calm—"le tempts était chaut et calm;" yet at the instant the trumpet announced the approach of the Emperor, the thunder roared, and such a horrible tempest of rain and hail burst from the skies as unhorsed the cavalry soldiers, dispersed the horses, and actually drove the army off the field! "Lorsque la trompette donna le signal de l'arrivée du chef, des coups de tonnere se firent entendre; une effroyable tempete se déchaina sur la terre; le ciel était obscurée au point qu' on ne se reconnaissait à une courte distance, qu' é la lueur des eclairs. Une forte grêle lancée avec violence par les vent impetueux, fit rompre les signes, &c. Les chevaux affrayés cherchaient é s'enfuir, et se jetaient les uns sur les autres, &c." Baron Larrey never before witnessed such a tempest, and all things considered, there was no great superstition evinced by the following question:—"Etait-ce le sinistre présage des malheurs qui nous attendaient?" It would have been wise for Napoleon, though unfortunate for Europe, had he viewed this commotion of the elements as a warning to rein his ambition.

At Witepsk there was some sharp fighting between the French and Russian armies, and 45 amputations were performed. All those who were operated on within the first 24 hours, were successful. Of those, on the other hand, who were amputated on the 3d, 4th, or 5th day, many died.—

* The French term for clearing a wound in the above manner is "*debridement*," which we cannot otherwise translate than by the awkward phrase "*unbridling*" a wound. For conciseness, however, we shall probably, in this article, use the word "debride," or "debridle," hereafter, to signify the above process.—*Rev.*

This circumstance, the Baron observes, has long been familiar to military surgeons—"et il ne peut rester aucune doute sur la nécessité de faire l'amputation sur le-champ lorsqu'elle est indiquée." 25. Among the remarkable wounds in this action was that of an officer who had a musket ball lodged in the bladder. Lithotomy (if the term be allowed) was performed, and the patient was well before the 30th day. The Baron amputated a Russian soldier at the hip-joint. On the 25th day the wound was nearly healed. But the total failure of provisions at this time brought on fever and dysentery in this and many other wounded men, of which disease the unfortunate Muscovite died on the 30th day after the operation.

The French army pursued the Russian, with rapid strides, to the banks of the Nieper, where the latter made a determined stand, within the fortifications of Smolensko, a very strong town, situated on a bold promontory, washed by the above-mentioned river. Thirty thousand Russians occupied Smolensko and the neighbouring heights. The French carried all the positions, one after another, at the point of the bayonet, after 24 hours of the most sanguinary conflict our author ever witnessed. The gates, the breaches, and the principal streets of Smolensko were filled with dead, and dying—principally Russians! The French had twelve hundred killed, and six thousand wounded. The loss of the Russians was incalculable!

It is melancholy to think that even before *this* battle, which may be considered as the *first* of the Russian campaign, the French army was almost completely destitute of every kind of dressings, &c. for their wounded men! "Ici, comme a Witepsk, nous fumes en penurie de toutes sortes de secours materiels pour les pansemens de blessées." For lint they were obliged to substitute paper—and the parchment archives of the city were converted into splints. The cold-blooded cruelty of Napoleon, in thus making no provision for those wounded warriors who bled to satiate his ambition, we cannot find proper terms to execrate! For this and other crimes, eternal justice has wisely spared his life, that the vulture of revenge may long and deeply prey on his vitals beneath the burning rays of a tropical sun. May he live a thousand years, as a moral lesson to ambition and tyranny!

What the flames spared of this ill-fated city, was destroyed by plunder—"devenue la proie des flammes on du pillage." There was, of course, every variety of wounds. One of the most remarkable cases was that of a corporal in the 13th Regiment of the line. A bullet of large calibre shattered to pieces the head of the left humerus, the clavicle,

and the scapula, the bony fragments of which parts were reversed on the back, together with the torn and mashed soft parts:—"les fragmens asseux étaient renverses sur le dos, avec les parties molles décherées et attrites." This wound presented a most frightful aspect, and the poor soldier begged hard that the shattered parts, together with numerous splinters sticking in the flesh, might be cut away. Baron Larrey tied the axillary artery, and then detached bones and lacerated muscles, skin, &c. though with little hope of success, bringing the edges of such a tremendous wound as nearly together as he could with adhesive straps and bandages. On the 35th day after the operation, when Smolensko was evacuated, the patient was in rapid progress to recovery. But whether he perished afterward in the dreadful retreat, is unknown. During the first 24 hours, Baron Larrey performed eleven amputations *at the shoulder joint alone*, nine of which perfectly recovered—the other two died of dysentery. We must pass over the numerous other operations which our experienced author performed.

No sooner had he crossed the last branch of the Nieper, than Baron L. was seized with a kind of sea-sickness, which tormented him for months afterward, and was accompanied with some painful optical illusions, as an appearance of tremulous motions in the horizon and earth around him, for which he could no otherwise account than by the perpetual sight of huge masses of men in constant motion around him on the immense plains of Russia. From the capture of Smolensko, the French found every town and village in flames as they advanced. "Ici commencerent pour nous les privations de toute espece. Cet exemple sévère devait nous avertir des maux qui nous attendaient sur le reste de la route." But no—drawn along by an irresistible power, (entrainés par une puissance invincible,) Napoleon rushed towards his fate, and dragged, alas! 300,000 men to theirs!

They reached Viasma, a considerable depôt for the two Russias, but there all the immense magazines of oil, brandy, coffee, sugar, furs, &c. were blazing to the skies. It was with difficulty the army could pass through the conflagrating ruins. The town of Giad was in the same condition, and here they learnt that the whole Russian army was strongly intrenched at Mozaisk, and there determined to give final battle. Orders were therefore issued to prepare for a fiercer conflict than they had yet attempted, to the utter consternation of Baron Larrey, who had neither surgeons nor surgical materials for this new scene of carnage. Twenty-four hours' sojourn at Giad, however, gave our author some time to prepare, and no human being, we verily

believe, ever exerted more courage, patience, and humanity, on these trying occasions, than did our worthy and able Baron. Thirty-six hours' march brought the French army before the position of the enemy, and the 7th September was pitched on for deciding the fate of the campaign. At break of day more than two thousand pieces of artillery opened, on both sides, and commenced their destructive work. The battle lasted with indescribable fury from six in the morning till nine in the evening; and when, as night approached, both armies made one desperate and last effort, the balance of fate vibrated for some minutes, as though uncertain which way to incline! "La victoire resta même quelques momens incertaine." Napoleon's *evil* star prevailed—and his destiny was sealed by the overthrow of the Russians. We say *evil* star—for had the Russians defeated him he might have fallen back on his resources, preserved the greater part of his army, and still wielded the sceptre.

On this bloody day the French had upwards of forty generals, and from twelve to thirteen thousand men, placed *hors de combat*, even by their own computations! That of the Russians was supposed to be upwards of twenty thousand! The difficulties and fatigues which the medical officers experienced, on this occasion, were indescribable; and the sudden change to cold and tempestuous weather added to their other embarrassments. Of eleven shoulder-joint amputations, two only died. The most remarkable case in this class, was that of a field officer, who mounted his horse the moment after the operation, and continued his march the whole way back to France without ever halting a day. He perfectly recovered.

In many cases, during this battle, Baron Larrey found the thigh shattered too high up to perform the amputation with the circular incision, and yet not so high as to require extirpation at the hip-joint. He therefore made the flap operation on a level with the great trochanter, or very near that apophysis. Here the Baron performed the hip-operation on a subaltern officer with success; but the patient was lost in the retreat afterward. In this place the Baron describes a most dangerous accident, which often wears an aspect, at the beginning, by no means threatening. It is when a ball strikes the femur a little above the knee-pan, and either passes through the limb, with fracture of the bone, of course, or lodges in the ham. In such cases he has generally found the condyles of the femur separated, and consequently nothing but amputation affords any chance of life. We shall abridge a case in elucidation.

Count Sackoveninsk, a Russian colonel (a prisoner) was carried.

with several of his countrymen, to the General Ambulance. He had received a musket bullet just above the left knee, which fractured the femur and lodged under the integuments of the ham. M. Bancel, after extracting the ball, was about to dress the wound and apply the fracture apparatus; but Larrey was first requested to see the Colonel. On a slight view there appeared nothing particular or very dangerous in the case; but on more accurate investigation the Baron had reason to believe that a perpendicular fracture extended down to the knee joint, separating the condyles of the femur. He therefore hesitated not to propose amputation. The surgeons present opposed the Baron's proposal, and the colonel was undecided. After a few moments reflection, however, this officer peremptorily requested Baron Larrey to take off the limb. He did so, and dissection showed the condyles separated, the knee joint filled with black blood, and the popliteal artery lacerated. Three other similar cases presented themselves on the same day.

Our excellent author preserved the knee joint in a great many cases, on this fatal day, where the leg was carried off, or disorganized so close to the knee that, without much previous experience, amputation of the thigh would have been resorted to. He had often before witnessed the good effects of amputating through the head of the tibia (dans l'épaisseur des condyles du tibia) and thus preserving the knee joint. In the present campaign such amputations had an immense superiority over those practised above the knee, on account of the greater facility with which the patients supplied themselves with wooden legs, and in consequence, preserved their lives (some of them at least) in the disastrous retreat.

During the first 24 hours our author amputated about *two hundred limbs*, which he thinks would have proved successful, in general, had the wounded even common accommodations. But, alas! they were totally destitute of every comfort and almost necessary of life; and far, far from any place that could afford them succour! Humanity will long bewail the miseries of these brave but unfortunate warriors, who deserved a better fate than to perish in the wilds of Russia, the victims of insatiate ambition in their chief! The Baron emphatically complains that the few resources in their power were not applied by the proper officer on this melancholy occasion.

Pursuing the enemy, the French army passed through Mozaisk, which they found, as usual, in flames; and in which, horrible to relate, were great numbers of wounded Russians perishing with hunger and thirst! Our author and a few humane soldiers administered to the wants and wounds of these wretches, thus deserted by their own medical and military officers, although their means were inadequate to the succour of their own countrymen.

Scarcely were the French army advanced a few miles from Mozaisk when they were astonished to find themselves (though in the immediate vicinity of one of the great capitals of the world) traversing sandy plains, arid and desert as those of Arabia. The mournful aspect of this solitude cast a gloom of despondency over the whole army, and seemed to prognosticate that Moscow itself, whose riches hitherto inspired them with hopes, would be found in ruins. During the march over this desert, men and horses sustained the most dreadful privations and fatigues, and thousands (particularly of the young conscripts) fell on the road. At length they reached Moscow on the 14th September, but found that the Russian army had drawn with them the almost entire population, and the French paraded the principal streets without meeting a human being! But what was more appalling, fires were seen to rise in various quarters where the French soldiers had not even penetrated, and particularly in the bazar of the Kremlin. The invading army, however, had just time to see and admire the noble buildings, elegant streets, and ample magazines of all kinds, with which this metropolis abounded, before the flames converted them into ruins. We dare not enter on Baron Larrey's description of this dreadful and magnificent conflagration, lest we should be drawn too far from the more direct object of our labours—the collection of scientific information.

It may be permitted us to remark one or two circumstances. It will hardly be credited that the Russian incendiaries continued, in the face of the French, (who hung them up or shot them in all directions,) to set fire to the houses till the whole city was one universal blaze. "La peine de mort, appliquée à ceux qu'on prenait en flagrant délit, ne faisait nulle impression sur les autres ; et l'incendie continua trois jours et trois nuits sans interruption." 73. Although Moscow was nearly reduced to ashes in eight days, yet when the fire ceased, and the French came to examine the ruins, abundance of every kind of provisions, furs, clothing, &c. were found in cellars and other subterraneous magazines—sufficient, Baron Larrey asserts, to supply the whole army till the ensuing summer! Thus it is evident that Nopoleon's timidity in abandoning Moscow, was equal to his temerity in approaching it! Another fatality attending the French councils was, that even while they did remain in Moscow the magazines were hoarded, and the soldiery half starved —which magazines they burnt or left behind them at last! "Quem deus vult perdere prius dementat." In abandoning the city, however, every cart, carriage, knapsack, and even pocket was crammed with Muscovite spoils. Darius's army.

on departing from Babylon, presented not such a quantity of riches. But the weather and the roads soon showed them that they must part with all their pillage, if they meant to regain their native soil. The army, however, presently got into a fine cultivated and inhabited country on the southern or Ukraine road; but here again Napoleon's evil star crossed him, and he determined to stretch northward, and return by the desert through which he advanced upon Moscow—"un grand sujet de chagrin pour toute l'armée." Here the tragic scene opens in earnest, and the horrors of this retreat baffle all human description! It was the cold that was their principal enemy; then famine, fatigue, the sword, &c. The Baron remarks, that he attributes his own preservation entirely to the salutary habit which he had of marching on foot in general rather than on horseback. Those, on the other hand, who observed not this precaution, were so benumbed with the cold, that when the bivouac fires were lighted, they did not feel the heat till the seeds of gangrene were sown. The Baron walked almost the whole of the way, and never approached a fire.*

Of all the dreadful scenes that occurred during this memorable retreat, the passage of the Berezina was the most terrific. The bridges broken down, and the enemy pressing in all directions on the flanks and rear, caused the most

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* In a recent work, published by Surgeon Begin, who accompanied this disastrous expedition, the following incident arrested our attention, and is not misplaced here.

"After leaving Moscow," says M. Begin, "we found all the villages in ashes, and a dead silence reigning every where around us. Having wandered a little from the main route of the army, I was roused from a melancholy reverie on the misfortunes of our army, by the groans of a human being who appeared, by the sounds, to be close to me. I stared around, but could see nothing, except scattered and half putrefied corpses. The groans continued, and I alighted from my horse to make a more careful examination of the place. After several minutes' search, I discovered in the ditch of a redoubt, and lodged in the disembowelled carcass of a horse, a wretched Russian soldier, whose right leg had been carried off by a cannon shot, and who had existed in that horrid asylum for six weeks—namely, from the battle of Moscowa! During this time he had lived on the carcass of the animal, whose bones and skin served him for a habitation. Almost every particle of flesh was clean scraped from the interior of the animal, the thorax and abdomen of which protected the wounded soldier from the pelting storm. The stump was nearly healed by the efforts of Nature alone, and the Russian, though pale, squalid, and haggard, was apparently firm in strength, and by no means ill in health." All M. Begin could do, was to give him a dram from his canteen, which set the poor Muscovite almost in ecstacies. He left him where he found him, but he had no doubt that the Russian army who were pursuing them, would relieve the unfortunate soldier from his dreary abode in a day or two afterward.

dreadful havoc and confusion—nothing was to be heard but the most lamentable cries of thousands trodden under foot by their stronger neighbours—nothing to be seen but desperation and despair! On this fatal day, Baron Larrey nearly fell a sacrifice to his anxiety to preserve some cases of surgical instruments. The professional respect in which he was held saved his life. No sooner was he recognised than the French soldiers, regardless of their own safety, passed him along over their own heads, from one to another, till he crossed the only crazy bridge remaining, and which was completely blockaded up with military materials, and the bodies of the living and the dead.

"J'étais pres de périr dans la foule à mon tour, lorsqu'heureusement je fus reconnu; ausitôt chacun s'empresse de favoriser mes efforts; transporté par les soldats de l'un à l'autre, je me trouvai, à ma grande surprise, en peu de momens sur le pont. Ce témoignage, qu'ils me donnerent de leur attachement dans cette circonstance, me fit bientôt oublier et les dangers que j'avais courus et la perte que je venais de faire de mes équipages." 101.

The passage of the Berezina seems to have completed the panic of Napoleon, for he immediately afterward abandoned his army, and made the best of his way back to France! The Russians pursued the remains of this ill-fated army no farther than Wilna. And now, out of 400,000 fighting men, about *three thousand* of the guards remained!

"Trois mille hommes de meilleurs soldats de la garde, tant d'infanterie que de cavalerie, presque tous des contrées méridionales de la France étaient les seuls qui eussent vraiment résisté aux cruelles vicissitudes de la retraite; ils possédaient encore leurs armes, leurs chevaux et leur attitude guerriere: les maréchaux ducs de Dantzick et d'Istrie étaient à leur tête; les princes Joachim et Eugene marchaient au centre de cette troupe, que l'on pouvait considérer comme le reste d'une armée de plus de 400,000 hommes, que les habitans du pais avaient vue défiler, six mois auparavant, dans toute sa force et dans tout son éclat. L'honneur et la gloire des armées françaises s'étaient en quelque sorte retranchés dans ce petit corps d'élite." 114.

Our analytical course shall now be more strictly professional. In our author's circular to the French surgeons, speaking of the effects of intense cold, he observes, that, in general, frostbitten sores (plais de congelation) present the same phenomena as burns. In both cases a gangrenous eschar, more or less extensive, is formed, the separation of which must be promoted by topical applications which excite the surrounding sound parts. The most simple and effectual dressing was unguentum de styrace, spread on linen or lint. Alcoholic embrocations and decoctions of cinchona

counteracted the process employed by nature in the cure. The eschars separated, the wounds are to be considered as simple, and treated accordingly. Where amputation is necessary, from the irreparable destruction of a member, Baron Larrey does not advise the attempt at quickly uniting the integuments covering the stump; but his reasons for this do not appear very clear to us. Our author observed that the inhabitants of the more southern parts of France and of Europe bore the intense cold of Russia better than those born in the northern and colder latitudes. It is a curious but certain fact, that when our soldiers or sailors return from our tropical colonies, they feel the first winter's cold in England much less than the subsequent ones.

Of the very few who withstood the rigours of this fatal winter, a considerable proportion were destined, on reaching a friendly soil, and having a supply of clothes and provisions, to encounter a new malady, which the medical officers denominated "*fievre meningite catarrhale de congelation.*" This disease, in a short time, became epidemic—and ultimately contagious. Our author traces the cause, properly enough, to the sudden change from cold and famine, to warmth and food—the result of which was an engorgement of the membranes, more especially of the mucous membrane of the lungs, and the meninges of the brain. These two principal effects were announced by tensive pains in the head with sense of heaviness;—lesion of the mental faculties and organs of sense; general debility; extreme anxiety. Cough now came on, and increased rapidly, accompanied by mucous, sometimes bloody expectoration. Occasional diarrhœa, inclination to vomit, and colicky pains supervened. The pulse was quick, the skin dry, the limbs benumbed, cramped, or spasmed. Sleep was laborious and disturbed with frightful dreams; the vessels of the eye were injected; fever became developed, with evening exacerbations, and great throbbing of the carotid and temporal arteries; delirium or lethargy ensued, and the danger was then imminent. When the issue was favourable, the inflammatory stage was generally of short duration, and was commonly terminated by a nasal hæmorrhage or diarrhœa, occurring on the fifth or ninth day. Sometimes, instead of these critical discharges from the mucous membranes, there was an abundant perspiration of a brownish colour, which tinged the patient's linen. When, on the other hand, the issue was fatal, apoplectic symptoms appeared, and proceeded with great rapidity, while erysipelatous spots showed themselves on the lower extremities, and soon became gangrenous. The urine was very scanty, and of a blackish tint

—the alvine evacuations fetid and black—all the natural functions became interrupted, and the patient sunk on or before the fifth day.

Our author had many opportunities of examining the bodies of those who died of this disease. On the surface of the brain were found layers of albuminous substance, but without any points of suppuration—the sinuses of the dura mater full of coagulable blood—the brain firmer than natural, and its vessels injected—the mucous membrane of the larynx and bronchia of a dark brown colour in some places—the intestines very much contracted—and gangrenous spots, very generally, on the lower extremities and abdominal parietes. Baron Larrey experienced a severe attack of this fever himself, after visiting several hospitals in which great numbers were confined. After suffering dreadfully from excruciating headaches, with occasional delirium, begging, in vain, to have the jugular vein opened, he was relieved by a copious and spontaneous hæmorrhage from the nose. He considers that the best mode of treatment was local and general blood letting—cold applications to the head—warm fomentations and sinapisms to the feet—and, after the febrile excitement was subdued, some gastric derangement remaining, the administration of a gentle vomit of ipecacuan, sharpened with a small proportion of tartrite of antimony. After this, gentle tonics and nourishing diet completed the cure. The most trifling excess during convalescence, was sure to produce a relapse. Those who recovered from this disease, generally lost their hair; and in one case, that of a surgeon, the nails of the fingers and toes dropped off. The disease spread, after some time, to the inhabitants of those towns where the French soldiers were confined, thus proving the contagious property which became superadded to its original character.

In describing the cases of some wounded men in the hospitals of Dresden, the Baron informs us that the practice of the Saxon surgeons, in amputations, was, to cut the integuments and muscles at one incision, down to the bone, the latter being sawn off very little above the level of the soft parts. The surfaces of the stumps were then brought into close contact, and thus retained by sutures and bandages. The tourniquet was then, and not till then, slacked off. No arteries were taken up, and no hæmorrhage, in general, ensued.

We are now to take leave of military movements, and endeavour to convey to the English reader some of the practical results of our able author's experience—an experience of thirty years service, and twenty-four campaigns!

1. *Reflections on Wounds of the Head, and their consequences.*—Our author proposes to investigate, 1st. Those cases demanding the trephine. 2d. Those cases where it is useless or detrimental, though formerly or still recommended by authors. 3d. Hernia cerebri. 4th. Abscess in the liver supervening on wounds of the head.

Baron Larrey thinks the trephine indispensable where, in fractures of the cranium, the fragments are displaced, and driven in so as to injure the dura mater and brain. Also, where the foreign body which has caused the wound is entangled in the fracture, or has penetrated, but to no great depth, into the encephalon. Finally, where we are sure that extravasation exists beneath the cranium. One of the most common symptoms of compression is paralysis of parts on the opposite side; and this symptom is the more unequivocal in proportion as it declares itself immediately after the accident, and gradually increases in degree. We shall pass over the cases which Baron Larrey relates to show the necessity of applying the trephine to remove foreign bodies and give vent to extravasated fluids, because the indications were sufficiently evident. We proceed to his *second* proposition. We should *not* apply the trephine, he avers, in cases of wounds of the head with fracture of the cranium, however extensive or stellated that fracture may be—provided the fragments are not driven in upon the soft parts;—no foreign bodies lodged;—and no symptoms of compression very evident.

The cerebral commotion, he justly remarks, is comparatively much less in cases of large wounds of the head with loss of substance in the soft parts, and fracture of the bones, because, (he thinks) the effects of the percussion resulting from the impression of the wounding body are lost or expended, as it were, on the more exterior wounded parts, particularly if the said body has struck the cranial dome in a diagonal direction. In these cases the central mass of the brain being spared, effused fluids are more readily absorbed—the fractured pieces afterward approach each other—and the accident is cured by the sole efforts of Nature. Under such circumstances the application of the trephine would retard rather than accelerate the healing process. Among the bad effects of the trephine, our author considers the laceration of the pericranium by the saw or other instrument, as the most dangerous. This operation augments the irritation of the contiguous membranes, and often determines those sympathetic affections (abscess in the liver for example) which supervene on wounds of the head. Here the Baron relates a very interesting case illustrative of the

propriety of the non-trephining practice, of which we shall lay a brief abstract before our readers.

"In May, 1812, near Berlin, a storekeeper was run against by a carriage going very rapidly, and had his head dashed against a sharp stone, which stripped the skull of integuments, and in some places, of pericranium, from the forehead to the tuberosity of the occiput. Immense flaps of integuments hung down over the neck and the ears. There was found a stellated fracture of the left frontal bone, one line of which was continued into the parietal bone of the same side. There did not appear any depression or displacement of bone. The man had a great hæmorrhage from the nose and ears, and preserved his senses. He was dressed in a clumsy manner, and great masses of charpee had been put between the flaps and cranium. The following day, being very ill and delirious, with acute pain, hard quick pulse, and flushed countenance, Baron Larrey was sent for. He removed all the dressings, and freely scarified the inflamed integuments. Common emollient dressings were applied, the patient was bled from the foot, and laxative drinks and lavements exhibited. The attendant surgeons had the trephining apparatus all ready when the Baron arrived; but the operation was deferred. The means above mentioned removed the pain and delirium, and the patient remained tranquil till night, when new symptoms of inflammation arose and rapidly increased. He was now bled from the jugular vein, and had mucilaginous, sedative, and antispasmodic drinks prescribed, by which he was relieved, and passed the night quietly. During the two succeeding days there were strong febrile movements in the system; but a sero-purulent discharge was soon established in the wounds, and became abundant, accompanied with much debility. A low fever was now ushered in with shiverings, pains, and nausea; succeeded by intense heat, thirst, and headach. Ice-cold applications were made to the head and surface of the body, with cold drinks, &c. The alarming symptoms subsided, and were succeeded by some bilious vomitings and involuntary stools. This moment was seized for the exhibition of an emetic, which evacuated the stomach and bowels of great quantities of fetid matters. In the following night there was another severe exacerbation, with fixed pains in the forehead, and delirium. Cupping glasses with scarificators relieved these symptoms greatly, and ice-cold applications were kept to the head. Next day the pyrexial symptoms had entirely subsided, but such alarming debility succeeded, as gave our author reason to apprehend typhoid fever. A large blister to the nape of the neck; and bark with infusion of arnica montana internally. Some wine was also allowed. Next day, (the 26th of the accident,) the patient appeared perfectly sensible, and the wound was filling with healthy granulations. From this time he slowly, but progressively, recovered." 197.

Baron Larrey remarks that if, according to the direction of authors, and the advice of several surgeons who had seen the case, the trephine had here been applied, there is little

doubt but that the operation would have exasperated the inflammation of the dura mater, (which certainly existed,) and thus proved destructive of life. From this and numerous other cases which have fallen under his notice, the Baron concludes that the operation of trephining is but seldom necessary, and that it should never be put in force if there be reason to apprehend inflammation of the cerebral membranes. The Baron therefore inquires, in this place, what is the proper period for the operation, in those cases where it is proper or necessary? Inflammation, he thinks, of the membranes of the brain generally, establishes itself after twenty-four hours from the injury; consequently the operation should be practised as early as possible in that period. If inflammation have commenced, the operation must be delayed till the symptoms of it are removed; for even the presence of foreign bodies compressing the cerebral mass is less dangerous than the attempts to remove them; and the patient has less chance of recovery, in the latter case, than if he were left entirely to the resources of Nature. When the operation is performed, the dressings should be extremely simple, the bowels kept open, the functions of the skin and the internal secreting organs attended to, and the most aqueous regimen enjoined.

Hernia Cerebri. What is the cause of this phenomenon? Without pretending to ascertain this exactly, Baron Larrey hopes to point out the road towards truth. He considers this protrusion as owing to an inordinate excitement of the vessels of the membranes and brain in the vicinity of the wound, caused either by the irritation of foreign bodies, or the access of atmospheric air. He has never seen recoveries from large herniary protrusions of this kind; and the means taken to cure the complaint, such as compression, excision, caustic, &c. always aggravated or accelerated the evil. The Baron therefore advises surgeons to defend the hernia from the external air by pieces of fine linen soaked in camphorated oil; to remove all foreign and irritating bodies; and to lessen general and local irritation of the system, and of the brain, by diluent drinks, laxatives, quietude, &c. By these means Nature will herself reduce the hernia, when it is reducible.

We may take this opportunity of stating that Mr. Astley Cooper has long treated Hernia Cerebri with considerable success—that is, with success in three cases out of four, in the following manner:—if the hernia protrude but little beyond the level of the integuments, a dossil of lint dipped in lime-water is applied, and over that the capular band-

age, with a moderate degree of pressure. If, however, the hernia protrude farther, and overlap the surrounding integuments, a silk thread is passed round the tumour, and drawn tight so as to cut the vessels, and in fact, remove the protruding portion. After this the dressing and moderate pressure are applied as above described. Mr. Cooper has been so kind as to inform us that in *young* people the foregoing plan will be crowned with success in the great majority of cases; but in *old* people it will be very much otherwise—for in them, all accidents about the head are dangerous, and too often fatal.

Here the Baron digresses, for a moment, from Hernia Cerebri, to relate two cases of wounds of the brain, for which he could not find a better place.

"During the campaign of Moscow, a grenadier of the ex-guard received a wound in the head from a Cossac's lance, which entered near the junction of the posterior superior angle of the left parietal bone with the occiput. The weapon was so sharp that it pierced the skull without the least splintering, and penetrated deeply into the brain. The man was left for dead on the field, but carried a few hours afterward into a neighbouring town, where he continued for a considerable time insensible. The lance was withdrawn, the wound dressed, and went on to cicatrization without accident. The intellectual faculties were not injured, but it was evident that the wound had destroyed the functions of certain nerves, as the glosso-pharyngeus, par vagum, hypoglossus, spinal and suboccipital. The voice, at first hoarse, failed altogether in the end. Deglutition was difficult—the sense of taste and smell became enfeebled—the muscles of the larynx became partially paralyzed, so that the larynx itself subsided half an inch lower down in the neck, dragging, straightening, and distorting the epiglottis and glottis, so that the patient was obliged to make extraordinary efforts to breathe by calling in the aid of various unusual muscles. The diaphragm participating in the paralysis could not act in dilating the cavity of the thorax, and the patient could not breathe without firmly closing the jaws, so as to draw up and widen the rima glottidis.—In short, the man would have been suffocated had his jaws been kept open for any length of time. The pharynx, œsophagus, and stomach, participated also in the paralysis, for deglutition was difficult, and emetics administered in large doses had no operative effect on the stomach. The abdomen evinced no alternate rise and fall corresponding with the respiratory muscles, as in other people; and when he attempted the least exercise, his face became discoloured, his body covered with perspiration, his extremities cold, the action of the heart slow, and the pulse scarce perceptible. When he sits down in quiet he recovers, in a great degree, from this state, and breathes with more freedom. *His digestion is very slow and difficult—he is obliged to eat very little and often, and to make use only of the most easily digestible substances.* He is threatened with marasmus." P. 209.

The other wound (by the point of a foil) which penetrated through the cribriform plate of the ethmoid bone, and went five or six lines into the base of the brain, was accompanied by many curious phenomena, which we have not space to state here, such as double vision, loss of smell for a time, hemiplegia of the opposite side, total forgetfulness of noun substantives, &c. &c.

II. *Hepatic Abscess succeeding wounds of the head.* It is well known that the author of "*Nosographie Chirurgicale*" made some notable experiments, by hurling thirty or forty dead bodies from various heights upon the stone floors, so as to fracture their skulls and lacerate their livers by the concussions; and thus, as he very knowingly supposed, explaining the phenomena of abcess in the liver succeeding gunshot wounds of the head! We need not wonder at the absurdity of this analogy, when we recollect the extravagance of a thousand others pressed into the service of medicine and surgery. Baron Larrey, besides pointing out many defects and incongruities in the above mechanical hypothesis, shows that falls *during life* are very different in their effects on the liver, from those which take place after life has ceased, and when, in fact, the structure of the liver loses its main cohesive powers. He relates several cases in proof of this, where men fell from great heights by accident or design, and where the cranium and sometimes the limbs were crushed to pieces, yet no lesion of the liver was observable on dissection. In short, it is only where the hypochondrium comes in contract with some hard body in the fall, that rupture of the liver is frequent, when the accident happens to the living subject. On the other hand, as the Baron observes, abcesses in this organ are often seen to follow slight wounds of the head, unaccompanied by fracture, and unattended by any violent commotion of the system.

For a long time past Baron Larrey has had occasion to observe that the respiratory and biliary organs, but particularly the latter, were disturbed in their functions, and decidedly influenced by inflammation of the fibrous membranes of the brain and extremities. It appeared to him that the irritation established in a portion of the above membranes, was rapidly propagated, sympathetically, to the centres of those organs supplied by the ganglionic nerves;—and the liver being the most complex apparatus, with a peculiar capillary circulation, and copiously furnished with nerves from the great intercostal, seems the most disposed to receive this sympathetic irritation. Inflammation is kindled

up, and quickly terminates in suppuration, which generally kills the patient, if he escape the effects of the traumatic inflammation.

We shall here condense one or two of Baron Larrey's cases in illustration of the present subject.

"*Case.* A Prussian soldier, in the hospital of Gros Caillou, in the year 1814, had a false articulation in the middle of the right os humeri, in consequence of a fracture of that bone some months previously. With the hope of obtaining a reunion of the bones, a seton was passed through between their ends. Inflammation showed itself before the fifth day, and rose rapidly, with great tumefaction of the whole member from the shoulder to the fingers. To these symptoms were added acute pains in the right hypochondrium, with difficulty of breathing, oppression, and violent traumatic fever. The seton was withdrawn, emollient fomentations applied to the arm, and cupping glasses to the side, with diluent drinks, &c. These means were unsuccessful—the symptoms became exasperated—gangrene took place in the arm—lancinating pain was complained of in the region of the liver. In a few days, a tumour appeared under the false ribs, displaying an evident fluctuation and unequivocal marks of hepatic abscess. The state of debility to which the patient was reduced prevented the attempt of amputation of the arm or opening the abscess, and the patient died in 24 hours from this time. On dissection, an enormous suppuration was found occupying the right lobe of the liver, and ready to burst into the abdominal cavity. This abscess must have been occasioned by the inflammation of the arm, for the man was in perfect bodily health when the seton was introduced." 231.

The three following cases were successively received into the hospital of Gros Caillou, for sabre wounds inflicted in duelling. The first was a young chasseur, who had an oval piece of the external table and diploe of the right parietal bone removed by a sabre; the internal table remained entire. The wound was treated as a simple one, and the patient put on low diet and diluent drinks. The first ten days passed without accident, but on the eleventh, the suppuration in the wound ceased, and the edges became swelled and red. To these were added fever, headach, tingling of the ears, delirium, thirst, and deep-seated pain in the right hypochondrium. Leeches were applied round the wound—the right side and the temples were cupped; the head was covered with an emollient cataplasm, pediluvia and lavements were employed, and antimoniated drinks prescribed. In spite of these means, however, the inflammation advanced rapidly—the pains in the side became lancinating—shiverings took place, with cold sweats, hectic fever, &c. of which the patient died on the 21st day from the ac-

cident. On dissection the pericranium was found highly inflamed, as also the dura mater beneath the wound of the bone. The brain was not diseased. On opening the abdomen, a quantity of purulent matter was found extravasated, and which had come from an enormous abscess seated in the convex side of the liver, and penetrating deeply into its substance.

A few days after this, a dragoon of the guard was brought to the hospital, who had a pretty thick scale of bone cut from the os occipitis by a sabre, the inner table escaping. The wound appeared slight, and he was placed in one of the convalescent wards, having been dressed in a simple manner. The wound was in a very good state, and cicatrizing kindly, when, all at once, inflammation arose—the right hypochondrium became painful—fever was kindled up, and all these symptoms quickly increased in violence. At this time Baron Larrey was called in, and prescribed *local* bleeding, cooling laxatives, pediluvia, and *antispasmodics*, but without effect; (at which we do not wonder, for certainly more vigorous means would have been used by British practitioners on such an occasion.) Dissection showed violent inflammation of the pericranium and opposite portion of dura mater—considerable abscess in the liver—effusion of purulent matter into the cavity of the abdomen. Thus a man in the prime of life died of phrenitis and hepatitis, under one of the ablest physicians in France; and a vein was never opened during the course of his disease! Would any man believe this, were it not recorded by Baron Larrey himself? We rarely declaim, in general terms, against our neighbours on the Continent—we simply prove their maltreatment of diseases by their own symptomatology and dissections. Let them exonerate themselves from the charge if they can.

The last case we shall notice of this kind, was a grenadier, who was brought to the Gros Caillou hospital, with a sabre wound of the os frontis penetrating only as far as the diploe, and accompanied, for a short time, at first, with slight symptoms of commotion. The first ten days passed without accident; but at this period he complained of acute and continued pain in the wound, the suppuration being all at once suppressed therein. He had somnolency interrupted by convulsive movements and slight tendency to delirium; at the same time the patient complained of oppression, and dull constant pain in the right hypochondrium. Local bloodletting—diluents—laxatives—emollients. But symptoms of compression of the brain came on, with paralysis of the left *arm*, and continual agitation of the left *leg*. The right hy-

... while rigours and inclination ... seizure in the liver. The tre... ... depending angle of the ... thereby given to a spoonful of ... blood, which was lodged be... ... It is needless to observe, ... terminated the patient's ex... ... discharge of purulent matter was ... from a large abscess in the substance

... that face of these wounded men ex... ... other shock to the hepatic system, ... of the abscess in the liver.

... of the *throat*, there were some ... recommend. We shall abridge one or

... presented himself with a gunshot wound ... the larynx, and taking a direction down... ... under the thyroid cartilage, which ap... ... track of the ball appeared to descend ... the chest, where the projectile was lost. ... with a constant oppressive pain, and diffi... ... accompanied with redness of the face, turges... ... difficulty of swallowing solid food, and great ... The probe gave no indication of ... instrument always pointed to the site of the ... seat of suffering. Notwithstanding the ... symptoms, Baron Larrey enlarged the wound ... without however procuring any advan... ... convinced that the ball was lodged behind the ... and not in any part of the cavity of the ... forward the ball presented itself at the ... it was fortunately seized with the forceps ... moment the patient was relieved, and ... cured." 247.

... of a young sharpshooter, who was ... his state of suffocation indicated ... which the patient was, when he pre... ... operation. Speech was abolished, and ... symptoms of death. Respiration was al... ... effort at expiration, some airbub... ... blood, exuded from a gunshot wound ... side of the larynx, between the os ... cartilage, the os hyoides being fractu... ... traversed the throat, and issued be... ... lower jaw on the opposite side. The

patient had lost much blood, and suffocation seemed to be threatened by the fluid accumulating in the larynx, the rima glottidis being wounded. The surgeon (M. Emangard) was much embarrassed; but luckily thought of making an opening anteriorly into the thyroid cartilage. The moment this was done, air and clots of blood rushed out. The swelling and engorgement of the neighbouring parts quickly subsided—respiration was rendered comparatively free, and the patient was snatched from the jaws of death. The wound was cleared by degrees, and the functions of the parts gradually restored, with the exception of the voice; and the patient conducted to a cure in a short time. 248.

IV. *Wounds of the Chest.* If, says Baron Larrey, a few people escape the fatal consequences of balls lodging in the cavity of the chest, they are, nevertheless, greatly harassed by the irritation of the foreign body occasioning a source of purulent secretion, and too often empyema. If the passage by which the ball entered remain open or fistulous, the matter is discharged with more or less facility, according to the position, and the prognosis is thereby rendered more or less doubtful. In all cases, Nature endeavours to expel the foreign body, or prevent it from irritating the neighbouring parts—in the first case, by establishing suppuration round it, the ball falling to the lowest point of the abscess, and there causing fresh suppuration till it finds its way to the surface, or into the hollow of some organ. This process is too often accompanied by hectic fever, emaciation, or even death. When the ball continues loose in the cavity of the chest, it will cause the death of the patient, if he be not relieved by art. At an early period the ball may be extracted between the ribs; but after some time, the ribs get contracted in their intervals, so as not to leave room for the extraction. In this case, a portion of rib itself must be removed —but neither the saw nor trephine is the instrument for this purpose. The lenticular knife used in trephining the skull, is the most proper, and there is much less difficulty in detaching a part of rib, (unless the patient be very old,) than might, *a priori*, be imagined.

Case. "A young voltigeur of the ex-guard received, in one of the battles near Paris, a musket shot, which cut away the upper half of the fourth rib, at about an inch from its sternal cartilage. The ball penetrated into the chest—traversed a portion of lung—and struck, without doubt, the spinal column, about the eighth or ninth vertebra, where its progress was arrested. This wound was accompanied with hæmorrhage, extravasation of blood, frequent faintings, oppression, anxiety, and spitting of blood—in fine, the patient said

he was certainly going to die. He was transported to the Ambulances, in the vicinity of Paris, where he remained till the month of August of the same year, at which time he was sent to Gros Caillou, and came under the care of our author. At this epoch the patient presented a fistulous wound at the upper part of the right side of the chest, with evident empyema of that cavity. He was greatly exhausted and worn down by the hectic fever. The wound discharged, at each dressing, a considerable quantity of pus, which the patient himself expelled by a particular position of the body. His emaciation was extreme, and the fever exacerbated in the evenings. Baron Larrey introduced a flexible sound into the wound which went to the bottom of that side of the chest, without any resistance, and there struck against a hard body, which the Baron judged to be the ball. From its position our author judged it practicable to open into the thorax opposite the foreign body, and between the eighth and ninth ribs, counting from above. The operation for empyema being performed at the above mentioned place, about twelve ounces of pus came away, and the Baron discovered the ball, which was easily extracted by a pair of polypus-forceps, the intercostal space being ample, and the ball rather flattened. The operation was followed by some formidable symptoms, but they were subdued in three days. The purulent discharge was considerable, but only issued from the inferior wound, the superior soon healing. Bark, in various forms, was administered, and the purulent secretion diminished daily, with evident restoration of the vital and natural functions—in short, this young soldier was on the point of being discharged cured, when, having committed a debauch in brandy, he was seized with enteritis, and died one hundred days from the operation, and six months from the receipt of the wound. The dissection confirmed the suspicions of Baron Larrey relative to the first track of the ball." 258.

The *second case* of this kind was that of a young corporal, 26 years of age, who was wounded by a musket ball, at the battle of Moillow, in Russia, on the 22d July, 1812, the ball entering the chest between the eighth and ninth ribs of the right side, and lodging in the corresponding cavity. This soldier fell insensible on the spot, and remained two days on the field of battle, menaced all the time with suffocation: —at length he was carried to one of the hospitals of Moillow, three days after which he was on the point of perishing from the effects of an enormous effusion in the chest, but was providentially relieved by one of the French surgeons, who enlarged the original wound with a probe-pointed bistoury, and thus performed the operation of empyema, which snatched the patient from the jaws of death. He was subsequently removed to the hospitals of Cowno, Konings-berg, and Thorn. A few weeks after arriving at the latter place, the wound having closed, for a short time, the patient experienced a renewal of the symptoms of com-

pression and difficulty of breathing, which were relieved by a spontaneous discharge of matter from an abscess formed under the edges of the false ribs. From this orifice fragments of clothing were discharged with the purulent matter. But this channel soon closed, and one opened out again and continued discharging. The ball could not be found, and the patient dragged on a wretched existence in various hospitals, for the space of four years, (having been discharged incurable by a board of health,) when he was, at the intercession of Baron Larrey, admitted into the hospital of Gros Caillou, on the 15th of June, 1816. On the first examination, Baron Larrey discovered the ball, by means of a sound introduced to the bottom of the right thoracic cavity. The purulent discharge was still copious from the fistulous wound, and the patient was suffering from incipient hectic fever. After having enlarged the wound, Baron Larrey made several vain attempts to extract the foreign body. The intercostal space was too confined, and the two ribs would not admit of the least separation. The Baron had moved the ball several times with the sound, and brought it near the wound, but it always slipped, and fell back into the cavity of the chest. How then was he to proceed? The anchylosed state of the ribs would not permit the application of a saw, (though made for the purpose,) without endangering the intercostal artery of the rib above, and the trephine, on trial, was found inadequate to remove a portion of rib, without which the forceps could not be introduced, nor the ball extracted. In this dilemma the Baron had recourse to the lenticular used in paring the bone after trephining. Having exposed about an inch and a half of the rib inferior to the wound, and tied a couple of arterial branches that bled freely, he introduced the lenticular knife, (the button being screwed off,) and sliced layer after layer from the superior edge of the said inferior rib, until he had formed a semi-lunar notch in it, five or six lines in depth. He now made fresh efforts to extract the ball, but the opening was still too small, as the Russian bullets weigh an ounce and a half, which is nearly double that of the French. He was therefore obliged to cut to within two lines of the inferior edge of the rib, not daring to go farther lest the intercostal artery should be wounded. A polypus forceps being now introduced, the ball was seized, and fortunately extracted, though with considerable difficulty, augmented by the ragged state of the ball itself. A warm aromatic injection was thrown into the cavity whence the ball was extracted, and the wound dressed superficially. In the night the patient (who supported the operation with great courage) suffered some distressing

symptoms; and at the morning visit, Baron Larrey found him with fever, thirst, and general increase of temperature. He experienced acute and throbbing pain in the region of the liver, and throughout the whole track of the bullet. Blood was taken by cupping from the neighbouring parts, and the patient confined to acidulated drinks, &c. by which means the inflammatory symptoms were reduced, and the patient's suffering relieved. A hæmorrhage took place from one of the arteries that had been tied, and this contributed to reduce the inflammation completely; but he appeared so weak, that slight tonics were prescribed. He continued two or three days in a very favourable progress towards recovery, when, happening to go by himself to the water-closet, he fractured, by a sudden incurvation of the body, the remaining portion of the ninth rib, and ruptured the intercostal artery, the hæmorrhage from which brought this unfortunate patient once more to the brink of the grave! Baron Larrey was immediately on the spot, and both arrested the bleeding and provided against its occurrence—"à l'aide de la bourse compressive et tres-ingenieuse de Desault." The pulse, however, was gone, the extremities cold, and all the symptoms of death present. Cordials restored the circulation, and perfect quietude preserved it. For two or three days he manifested symptoms of putrid fever, and was in great danger. The dressings were cautiously removed, and a quantity of purulent matter issued from the wound, which exhibited the phenomena of incipient hospital gangrene. Baron Larrey immediately exhibited a vomit, notwithstanding the precarious and peculiar situation of the patient. The emetic, which operated well, and discharged copious evacuations upwards and downwards, gave a sudden turn to the dangerous state of the patient. From this moment he felt himself better, and went on rapidly to convalescence and recovery. He was afterward presented to the "Societé de Medécine," on the 22d August, 1816.

V. *Gunshot Wounds of the Abdomen.* Baron Larrey's attention has been much directed towards wounds penetrating the confines of chest and abdomen. Those of the right hypochondrium are more or less dangerous according to their depth; but in all cases where the liver is wounded, however slightly, there quickly supervenes such a disturbance of the vital functions as threatens the patient with imminent danger. "Where bile becomes extravasated in the abdominal cavity the case is mortal."

"At first (in wounds of the liver) the surface of the body becomes of a yellow tint, the eye hollow, dull, and watery:—the cold spreads

from the extremities towards the trunk—nausea, hiccup, and anxiety are developed—the urine is bloody and scanty—the alvine excretions are devoid of bile—the pulse is small and weak—the voice fails—respiration is short, and more or less laborious. These symptoms become rapidly aggravated, and the patient dies, unless relieved by art." 270.

The first thing to be done is to enlarge and clear the wound, extract with caution all extraneous bodies, and to apply to the wound one or two cupping glasses exhausted of air; cupping, with scarifications, the neighbouring parts. These operations are to be repeated whenever the local pain assumes any degree of intensity. When the objects are accomplished, the lips of the wound are to be brought into contact, and held so by proper dressings. The dry and moist cupping, Baron Larrey observes, have the property of discharging not only the blood extravasated in the sinuses of the wound, but of disgorging the weakened vessels of the organ, favouring the resorption of effused fluids, and thus preventing inflammation. General blood-letting, he thinks, is not so advantageous, as it weakens the system without much relieving the part. The interior of the wound must be carefully preserved from the contact of air—the diet must be most rigorous, and the bowels kept open.

Where wounds of the abdominal parietes are accompanied with protrusion of a portion of omentum, Baron Larrey has advised the surgeon not to return it, nor yet remove it by knife or ligature. Soon after the accident, he observes, the protruded portion swells, thickens, reddens, and becomes rugous. These symptoms increase till the third day, after which they become stationary till about the fifteenth, when the part begins to shrivel, and ultimately is reduced without any operation. When the protruded part gangrenes, authors have recommended it to be removed by the knife, after passing a ligature round its base; but the Baron protests against this as unsafe and unnecessary.

"*Case.* A young officer was carried to Gros Caillou in August, 1815, apparently expiring, with a sword wound penetrating the abdomen, accompanied with hæmorrhage, protrusion of the omentum, and injury of the stomach. Baron Larrey was called up to him in the middle of the night, and found a wound about an inch and a half in extent, at the inferior part of the right hypochondrium, two inches from the cartilage of the eighth rib—a considerable portion of epiploon being protruded and strangulated by an irregular wound through the abdominal muscles. The pulse was feeble, the extremities cold, the vomitings frequent, the anxiety extreme, with hiccup, loss of voice and power of articulation—in short, every appearance of approaching dissolution. It was not deemed advisable, under these

circumstances, to attempt any operation. The night was passed in great distress; nevertheless, in the morning, the pulse and animal heat were, in some degree, restored; but the local pain was very acute, with bloody vomiting and hiccup. Baron Larrey now enlarged the wound of the integuments, without touching the omentum, which was thus liberated from strangulation, and the vomiting, &c. ceased. This done, the Baron enveloped the exposed omentum (as large as an apple) in linen soaked in warm wine—placed the patient in a proper position—prescribed acidulated drinks, lavements, and embrocations to the abdomen. The alarming symptoms now subsided gradually, and after the fifth day he appeared out of danger. After the first 24 hours, the protruded epiploon swelled to nearly the size of one's fist, being red, rugous, and evincing signs of sensibility. It remained in this state till about the tenth day, when it began to diminish in volume and density, which was accelerated by graduated pressure through the aid of a compress. The epiploon returned by little and little, till the whole was drawn into the abdomen, the wound cicatrizing as the omentum retreated. The officer was perfectly recovered by the 45th day from the accident." 281.

Another very interesting case is detailed, but we deem the foregoing one sufficient for our purpose.

VI. *Wounds of the bladder.* It is well known that the ancients considered wounds of this organ as mortal; but modern surgery has proved the contrary. When the bladder is void of urine, it is very difficult to wound it by any kind of instrument. But soldiers and sailors in the heat of action, particularly if the engagement be prolonged, are very apt to have this receptacle so filled as to present a conspicuous mark for sword or bullet entering the pelvis. When the bladder is penetrated in any part of its parietes *covered with peritoneum*, it is usually mortal. The urine escapes into the cavity of the abdomen in such cases, and death generally takes place in forty-eight hours. When the wound, however, is situated in any part *not* covered by peritoneum, it is not necessarily fatal, unless the internal hæmorrhage is excessive. In this class of lesions the urine occasionally escapes by the external wound, especially if a catheter be not kept in the urethra, a very necessary precaution to prevent this, and the extravasation of urine with its necessary consequence, the formation of abscesses. Warm baths and formentions, with enemata and local bleeding, must not be neglected. We shall here introduce a summary view of two cases which are not devoid of interest.

"A chasseur of the ex-garde was struck in the upper and outer part of the thigh by a cossack's lance, while in the act of a cavalry-charge, the point of the lance glancing upwards and inwards, pun-

ing the inguinal glands, under the crural arch, and penetrating into the bladder, below the reflection of the peritoneum. The urine immediately followed the direction of the wound, and appeared at its orifice in the thigh; a few hours after which, the water was passed by the urethra with a considerable quantity of blood. To this hæmorrhage a state of quietude succeeded, the urine not appearing any more by the wound, the edges of which were brought into contact by proper dressings. Suppuration and an abscess became established in the track of the wound, and, when opened, a quantity of pus and urine was discharged—the wound remaining fistulous for some considerable time. Nevertheless, by means of the elastic catheter in the urethra, and proper dressings, the patient was conducted to perfect recovery." 289.

The other case was that of a French soldier, who, being half drunk, at one of the bull-fights in Spain, entered into the arena to contend with the enraged animal, in imitation of the professed fighters. He soon felt the consequences; for the irritated bull impaled him with one of its horns, and tossed him to a considerable distance behind! One of the intrepid combatants immediately darted on the infuriated animal, and killed him on the spot. Baron Larrey leaped into the arena, and was the first to give succour to the wounded soldier, who was lying insensible on the ground. He was quickly conveyed to the hospital, attended by the Baron, who found a torn wound, an inch and a half in extent, at the upper part of the right buttock, and taking a direction towards the lower part of the groin of the same side. On farther examination, the Baron ascertained that the horn of the animal, which was sharp and much curved, after having lacerated the cellular substance, and glands of the groin, had passed under the crural arch, penetrated deep into the pelvis, and wounded the bladder, which was full of urine at the time. The bladder, however, had not been pierced throughout all its coats—the inner one remained whole, and formed a hernia, or membranous pouch under the crural arch, as large as a pullet's egg. There was considerable hæmorrhage at first from the wound—the man was cold—his pulse very small—his anxiety great, and there was suppression of urine. After taking some coffee, he became sick and vomited, which disembarrassed his stomach of the wine, and relieved all the symptoms except the frequent inclination to make water. After clearing and enlarging the wound, and introducing a gum catheter by the urethra, Baron Larrey easily, though gradually, reduced the cystocele by gentle pressure. Tranquillity was restored, and the patient did well. He kept the catheter in the bladder, however, until the wound was healed. 291.

In respect to *gunshot* wounds of the bladder, our author observes, that a ball may either pass through the bladder, and make its exit by the integuments, or lodge in the bladder itself. In the former case the urine escapes by one or both orifices, according to their situation. There is a diminution or total suppression of urine by the urethra, with discharge of blood by that passage, more or less considerable. The patient experiences very acute pain in the direction of the wounds—frequent and painful efforts to make water—nausea—sometimes vomiting—extreme anxiety and inquietude—paleness of the face—and sometimes plaintive cries. Not unfrequently the rectum is wounded, and the urine is voided by the anus. If the wound of the bladder be situated where covered by peritoneum, the extravasation of urine into the abdomen soon brings on inflammation there, and rapid death—often with apparent metastasis to the brain, and urinous odour through every part of the body.

Although the urine passes, at first, by wounds of the bladder, it is rare that any extravasations into the cellular membrane take place in the early periods of the accident, because the parietes of the track of the ball swell and become engorged, thus presenting a barrier to the infiltration. But when the sloughs are detached, the urine flows afresh along the track of the ball, and *then* it may penetrate into the surrounding cellular tissues, and cause serious mischief. This mischief can only be prevented by assiduously keeping a gum-catheter in the passage. Sometimes the rupture of arterial branches causes an effusion of blood into the bladder, and great irritation, heat, and inflammation. This accident is recognised by retention of urine, small pulse, paleness of the countenance, and dryness of the wound. The blood very rarely forms a coagulum in the bladder, on account of its constant dilution by the urine; consequently it may generally be drawn off by the catheter. Emollient and anodyne injections, at these times, are beneficial. At all times, Baron Larrey thinks, the entrance and exit of the ball should be well *debrided*, (scarified,) taking care not to injure parts of importance. This scarification is a *local bleeding* of the greatest advantage in repressing inflammation, and facilitating the subsequent separation of the sloughs. The three or four first days of wounded bladder are generally very severe; and, provided the urine flows by the proper channel, during this period, no catheter should be introduced. But at the moment when the sloughs are about to separate, the suppuration being established, then the catheter is to be passed into the bladder to prevent infiltration of the urine along the wounds. We shall abridge a case in illustration.

"The Sieur Burnot was wounded at the battle of Hanau, on the 30th October, 1813, by a musket bullet, which traversed the scrotum, tore the spermatic cord of the right side, fractured the inferior ramus of the pubis, cut the urethra, entered the bladder, traversed that organ and the rectum, and came out at the upper part of the left buttock, about an inch from the anus. The discharge of urine and stercoraceous matters, both by the wounds and by the anus, left no doubt as to the double lesion of these viscera. The patient was conveyed to the hospital of Mayence, where Baron Larrey directed the treatment. The small quantity of urine which escaped by the entrance of the ball through the scrotum, had been sufficient to affect with gangrene the cellular tissue of those parts. The extirpation of the testicle, rendered necessary by the destruction of the cord, and the deep scarifications practised, arrested the progress of the gangrene. The sloughs were detached, all the bad symptoms subsided, and the patient escaped the first danger. Baron Larrey now passed into the bladder a hollow elastic catheter; prescribed lavements; and ordered a proper regimen. The urine and stercoraceous matters had passed, for some time, by the posterior wound; and sometimes also by the urethra were passed small fragments of bone, accompanied by acute pain and some discharge of blood. The anterior wound healed first; the posterior continued a considerable time fistulous—the patient being long harassed by "un flux diarrhéique urineux." The catheter was continued without intermission—the wounds cicatrized, and the patient got perfectly well." 298.

Baron Larrey quotes an interesting case related in the Memoirs of the Academy of Sciences, for the year 1725, proving that gunshot wounds of the bladder are sometimes attended with dangerous hæmorrhages.

"A mason at Lausanne, 25 years of age, received a musket shot in the abdomen. The bullet entered about an inch from the pubis on the left side, and two fingers' breadth from the linea alba, penetrating the rectus muscle, epigastric artery, fundus of the bladder, and os sacrum, coming out near the anus. The spermatic cord was also wounded, but none of the intestines. The urine issued from both wounds. There was great hæmorrhage during the first few days; and there appeared to be an accumulation of blood in the bladder, producing pervigilium, delirium, ardent thirst, retention of urine, tension of the abdomen, and other dangerous symptoms. M. Martin, the surgeon, after trying a number of remedies in vain, had recourse to emollient injections into the bladder, which facilitated the expulsion of blood and urine, after which the dangerous symptoms quickly subsided."

When a ball lodges in the bladder, nothing, of course, but lithotomy can be depended on. Baron Larrey prefers the lateral; or, as he terms it, the *sub-public* operation, performed with the knife alone. and not the gorget.

VII. *Wounded Arteries.* The subject of wounded arteries has been studied with more attention in England than in France, and therefore we shall not dwell on any of Baron Larrey's didactic precepts. We shall merely introduce a few cases, abridged from the original.

"A young soldier of the ex-garde received a gunshot wound in the left thigh, at the battle of Dresden, in 1813. The ball had traversed the lower third of the member from within outwards, destroying the femoral artery a few lines above where it passes through the triceps muscle. A considerable hæmorrhage took place at the moment of the injury, to which succeeded faintness, and abolition of pulsation in the popliteal artery. After scarifying (débridé) the anterior wound, and removing some clots of blood that occupied the space between the two wounds, our author introduced his finger, and a void, where the femoral artery before ran, was now felt. Above the void, the torn and contracted extremity of the vessel was felt pulsating. As there was no appearance of new hæmorrhage, Baron Larrey contented himself with a simple dressing, and resolved to wait the event. No hæmorrhage occurred, and the wounds were both healed by the 61st day from the accident. The circulation in the extremity was gradually re-established, but no pulsation returned in the popliteal artery." 323.

The following case presents some interesting particulars.

"Daniel Hyppolite, a sergeant in the royal garde, received the thrust of a sword in the upper part of the right thigh, on the 9th of April, 1817, the weapon entering about three inches and a half below the anterior inferior spinous process of the ilium, and penetrating two or three inches in a horizontal direction inwardly, in the site of the femoral artery. The blood issued *per saltum*, in great quantity, and syncope put an end to the flow. Next day the hæmorrhage returned, with the same phenomena, and was restrained with the greatest difficulty. The patient was now sent to the hospital of the garde, and Baron Larrey visited him, when the following circumstances were noted:—viz. a tumour in the right groin the size of one's fist, extending from the anterior inferior spine of the ilium to the pubis, of a bluish colour, and pulsating synchronously with the other arteries. The patient experienced a sense of coldness in the leg and foot of that side, and a sensation of much heat in the tumour itself. A febrile movement was evident in the sanguiferous system. He was bled from the arm, and the operation repeated twice within the first twenty-four hours. He had cold drink for beverage, with a cold cataplasm to the tumour, while the limb was wrapped in hot flannel. Perfect rest and the horizontal position were enjoined. In two or three days the symptoms were mitigated, and the tumour began to diminish in size, the pulsations concentrating, and growing more feeble. Ice, enclosed in a bladder, was substituted for the cataplasm. The reduction of the tumour was succeeded by an acute pain in the knee and leg of the same side. The pulsations of the femoral

artery in the thigh and at the ham had become greatly enfeebled, while the articular artery on the inside of the knee joint was felt beating very strongly. These considerations led to the belief that the crural artery was obliterated in a great part of its extent, and that a new line of circulation was established by anastomosing vessels. Nevertheless, the pulsation gradually returned in the femoral artery, while the increased size and action of the articular branches progressively decreased, evincing a restoration of the original channel of the circulation." 326.

We shall conclude our analysis with a pretty full detail of a very remarkable case of wounded artery.

Peter Cadrieux, 32 years of age, was wounded in a duel on the 20th November, 1811. The point of his adversary's sabre entered above the sterno-clavicular articulation of the left side, passed backwards and rather downwards, cutting a portion of the sterno-mastoideus and scalenus anticus muscles, wounding the subclavian artery, the subclavian vein, and probably a considerable portion of the brachial plexus of nerves. A tremendous hæmorrhage ensued, and syncope was the result. Being carried to a neighbouring house apparently lifeless, he was restored by wine and cordials, and then transported to the hospital of Gros Caillou. On the morning of the 21st, Baron Larrey saw the patient, who presented all the symptoms of approaching dissolution. He was cold as marble—face pale as death—eyes expressionless—voice inarticulate. The wound, which was about three quarters of an inch in breadth, did not give out any blood; but a pulsating tumour, both above and below the clavicle, effaced all appearance of that bone. These pulsations, which were synchronous with the pulse, were more distinct below than above the line which the clavicle was known to occupy. A thrilling sound was also distinctly heard in the direction of the axillary vein, which resembled that of a fluid passing through tortuous metallic tubes. The arm of that side was cold as ice, insensible, motionless, and without arterial pulsations. The pulse of the other arm was small, and hardly perceptible; yet the respiration was free, and gave no evidence of any extravasation in the chest. Although there was little expectation of life in this case, Baron Larrey hastened to have the arm chafed with warm chamomile oil, and then enveloped in hot flannels. The whole surface of the body was also chafed with hot and stimulating liniments, and nourishment was exhibited internally. By these means the powers of life and the natural temperature were gradually re-established. At the evening visit, Baron Larrey found the patient agitated and restless, with symptoms of approaching irritative fever. The tumour

and the corresponding member were in the same state as before; but the jugular veins of that side were gorged and pulsating. Some demulcent and slightly anodyne drinks were prescribed for the night, and a surgeon was placed to observe what might happen.

22d Nov. Morning. The aneurismal tumour, without being augmented in size, was pulsating more strongly, as were the jugular of that side, and the carotids of both sides. The face was flushed, and the patient complained of a violent beating in the head. He was bled from the other arm—and compresses wet with gelid fluids were kept on the tumour,—emollient lavements. The night between the 22d and 23d was very restless.* At the morning visit of the 23d the vessels were found extremely gorged—the headach violent, and signs of approaching delirium—pulse of the sound arm febrile and nervous—(febrile et nerveux.) The left jugular vein was opened, and the blood flowed in an arch of a vermillion colour, and with all the characters of arterial blood. This bleeding calmed all the symptoms, but still the patient could not sleep.

24th. All the symptoms were again greatly aggravated, and a third bleeding from the arm was practised. The insomnium and cephalalgia continued with trifling variation till the ninth day, one more venesection being performed in the interval. All this time the low regimen and external cold applications were persevered in, the state of the tumour and arm remaining in *statu quo*. The wound made by the sabre was cicatrized on the 8th day. On the tenth day the veins of the affected member began to swell—they had hitherto continued shrunk—the cephalic vein of this arm pulsated—the animal heat and sensibility became developed in the greater part of the member; but still there was no pulse. The aneurismal tumour was reduced in volume, and concentrated into a small space under the clavicle and behind the pectoral muscle; but the whizzing sound, before alluded to, was more audible than ever. Several days passed in this state, the pains of the head diminishing, the sleep returning, and the danger appearing to lessen. The hand still remained immoveable, and the patient experienced a sense of most troublesome formication there, which no lini-

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* The French have a curious but expressive term for a restless or bad night spent by a patient—they call it a *stormy* night. Thus, "la nuit du 22 au 23 fut *orageuse*." When symptoms or diseases are *violent*, they term them *thundering*—"foudroyant." In some cases this term appears rather incongruous to the English ear. Thus, when an apoplectic patient is lying *speechless and motionless*, he is said by the French physician to have a—*thundering apoplexy*.

ments or anodynes could assuage. The aneurismal tumour had entirely disappeared by the 20th day, the whizzing noise continuing the same, as also the pulsations in the veins of the arm and neck. The cold applications were now discontinued, and light nourishment was permitted. The heat, sensibility, and power of motion in the arm gradually returned, and about the 50th day slight pulsations were felt in the radial and ulnar arteries. The noise was diminishing, as was the pulsation of the brachial and jugular veins. This was the state of the patient when Baron Larrey presented him to the Society of the Faculty of Medicine, on the 56th day from the accident. On the Baron's return from Russia, in August 1815, he examined the patient, who, in the interval, had been placed in the hospital of invalids, and had been a second time presented to the society. The changes which had taken place in these four years were remarkable enough. In the *first* place the axillary, radial, and ulnar arteries, which, at the end of 56 days, had recovered, in a great measure, their pulsations, were now completely motionless, while the heat and nutrition of the limb had suffered no interruption—a fact which proves the formation of a new system of circulation in the member. In the *second* place, the pulsations, at first so remarkable in the brachial and jugular veins, have entirely ceased, and the vessels themselves, if still existing, are not visible. *Thirdly*, the principal fingers of the hand are strongly retracted, and deprived of motion—probably, in Baron Larrey's opinion, owing to the wound of the brachial plexus. We shall not enter into the Baron's reflections on the above curious case, as our surgical brethren will be able to turn it to account in their own minds. But we cannot help noticing a note which the Baron has inserted at page 353 of his work, which we shall literally translate. Speaking of the operation of tying the external iliac artery, first practised by Mr. Abernethy, and subsequently by Mr. Astley Cooper, and many others, the Baron observes:—

"This operation forms the subject of a question too important to be treated of here; but I will just say, by way of anticipation, that the dissections of *almost* all the subjects who had undergone this operation, showed all the characters of an aneurismal diathesis—that is to say, there were found aneurismal tumours in other arteries at a distance from that on which the ligature had been placed. This being the case, I ask what purpose can the operation serve." 353.

We answer, in the first place, that Baron Larrey cannot possibly have seen one in ten of those who have had

external iliac artery taken up, and consequently his assertion is not founded on a proper basis. In the second place, if tying the external iliac artery be capable of *producing* what the Baron terms the aneurismal diathesis, it is quite evident that the ligature of the carotid inguinal, or other large artery, must be objectionable on the same principle. Yet we see all these arteries tied every year, and many of the patients living for a great many years afterward, without the developement of the aneurismal diathesis. If, on the other hand, he mean to infer that where an aneurism exists, requiring ligature of the external iliac, it may be inferred that there is probably also aneurismal dispositions in other arteries, then we say that experience does not universally, or, perhaps, generally support his inference, and that it is consequently untenable.

In respect to those cases which were operated on in this country, some certainly turned out to have an aneurismal diathesis, but many others not. Of the latter description we may mention two cases operated on by Mr. Brodie, one in the year 1813, the other in 1817. The former was seen five years after the operation, in good health—the latter three years after the artery was tied, and also in good health. These cases, were there no others, sanction the propriety, and demonstrate the *utility* of the operation, since one positive proof is worth a dozen of negative.

Baron Larrey must have been acquainted with the success which attended Mr. Astley Cooper's operations on the external iliac artery, as stated in M. Roux's Parallel, pages 275–6, and quoted in Cooper's Surgical Dictionary, 3d edition, p. 98. Since that statement appeared, Mr. Cooper twice performed this operation; once on a patient in Guy's Hospital, who died of secondary hæmorrhage, and again, two or three years ago, on Mr. Judd, a surgeon in Stamford, who is now living and following his profession in perfect health. In fact, there have now been nearly twenty successful cases of ligature of the external iliac artery by British surgeons, and therefore the propriety and utility of the operation are established on a broad basis of experience, which Baron Larrey's evidence to the contrary can have no power to shake.

Baron Larrey's work concludes with a memoir on the advantages of the moxa and actual cautery in hip diseases and Rachialgia; but as these remedies do not seem likely to come into use, at least at present, in this country, we shall pass over the subject, more especially as the limits which we assigned for this article are exceeded.

We entertain a high respect for Baron Larrey's zeal,

talents, and unbounded experience; and although we think that, on the subject of taking up the iliac artery, he has evinced something like a disposition to undervalue the intrepidity of British surgery, yet we attribute it to that *national pride* from which few of his, or perhaps of our own, countrymen are free. It is a pity, however, that such feelings should be able to insinuate themselves into the bosom of philosophy or science, and we hope the day is not far off, when they will be banished even from the breast of the politician. We must say, indeed, that except in this one instance, Baron Larrey's volume is remarkably free from national prejudice of every kind, and abounds with interesting facts and useful observations, of which we trust we have given abundant proof in this analytical review.

II.

Practical Observations on the Use of the Cubebs, or Java Pepper, in the cure of Gonorrhœa. With Cases. By Henry Jeffreys, Esq. Senior Surgeon of the St. George's and St. James's General Dispensary; Assistant Surgeon to the Lock Hospital; and formerly a Surgeon in the Third Regiment of Guards. One vol. 8vo. pp. 58. Callow, London, 1821.

We doubt much the correctness of Mr. Jeffreys's position, that Gonorrhœa "has descended to us from a very remote antiquity." We are rather disposed to think that, like many other diseases, it has sprung up from a more recent cultivation of a polluted soil. However that may be, its treatment is often difficult and unsatisfactory both for patient and surgeon. It is a treacherous disease, often appearing cured, and often suddenly returning upon the application of very trifling causes. Its consequences, too, are not seldom of a distressing nature, particularly as regards the calibre of the urethra, and the facility of discharging those excretions and secretions that are destined to travel through that channel.

Cubebs and Capivi have, of late years, been noisy candidates for *specific* honours in the methodus medendi of Gonorrhœa, or what we think is a more proper term, Blennorrhagia. The contest is not so easily decided as the raising a professor to a chair; nor is it perhaps of so much consequence to the republic of medicine. No detailed account of Cubebs having been given to the world, Mr. Jeffreys has here given the result of that experience. which a public in-

stitution and private practice afforded him—his design being nothing more than to record this result for the benefit of others. This design is laudable, and we proceed to sketch out the execution of it.

Our author justly remarks, in some introductory observations, that patients, looking upon blennorrhagia as a complaint more interfering with their comforts or pleasures, than of much consequence in itself, can seldom be induced to acquiesce in the necessary confinement, or submit with resolution to the strict treatment and abstemious regimen necessary for its eradication. For this disobedience they generally sup sorrow in the end—but the worst of it is, that they have a very ready knack of shifting the blame from their own shoulders to those of their medical attendant.

Mr. Jeffreys regards gonorrhœa "simply as a local affection," and to be rarely, if ever, followed by constitutional, or what are called *secondary* symptoms, except where mercury has been resorted to. We have seen some constitutional symptoms, as eruptions, sore throats, and fever, follow gonorrhœa, where no mercury was used. Mr. Carmichael and others have seen the same thing. In respect to the treatment, by Cubebs, the attention of the profession was excited a few years ago by Mr. Crawford's paper in the Edinburgh Journal, and our author observes that, whatever may have been the success of others, in his own practice he found Cubebs "not only a very safe remedy, but, in the generality of cases, infinitely more useful and expeditious than any which has ever yet been introduced into practice for the cure of gonorrhœa." 10.

The Cubebs pepper is indigenous in Java, being found in the woods near Batavia. It is also met with in the Isle of France and other parts of the East. The berries grow in clusters, like currants, and when dried have a wrinkled surface, light brown colour, warm, pungent, aromatic, and slightly bitter taste, but much milder than common pepper. A tincture may be made (cubebs ʒiij. sp. vin. ten. Oj.) possessing all the virtues of the berry. Taken into the stomach, the Cubebs does not appear to produce any very particular or predominant action on the system. Like other spices it is warm and stimulant—in some constitutions it proves mildly aperient, probably by giving tone and vigour to the bowels, in the same way as the celebrated Ward's paste." In others it has the contrary effect, and requires a laxative occasionally during its exhibition. In some persons to whom our author has administered it, headach and nausea were induced.

"When given in large doses, as a drachm and a half or two

drachms of the powder four times in the day, it appears to increase the secretion of urine, which assumes a deeper tinge of colour than usual, is voided somewhat more frequently and in larger quantity at a time, and acquires a peculiar and slightly aromatic odour, which is not unpleasant." 16.

Of the modus agendi of this medicine in gonorrhœa, Mr. J. professes his ignorance. We might all say the same thing respecting the greater number of medicines in the pharmacopœia. Its agency appears to Mr. Jeffreys to resemble that of copaiba.

"It possesses, however, what may justly be called a specific power in most constitutions, especially when administered in the early and acute form of the disease. It moderates the inflammatory and most painful symptoms, and suppresses the quantity of the discharge in a shorter time, and with more certainty, than any other remedy with which I am acquainted. I have reason to believe, that its exhibition is rarely, perhaps never, followed by any of those consequences, which so often take place under the more ordinary modes of treatment, when the discharge is suddenly checked, such as irritation in the bladder, strangury, swelled testicle, &c. It has not, at least, occurred to me to witness any of these accidents in my experience of the remedy; and as far as I have been enabled to observe, it is in the more inflammatory forms of the disease in which its efficacy is most certainly displayed." 18.

The good effects of Cubebs, in cases where it is serviceable, commonly begin to manifest themselves within 48 hours after the first dose. Unless some material relief is obtained in the course of five or six days, "its continued administration will rarely be attended with advantage." The period of cure, in successful cases, has varied from two or three days to a fortnight or more. In many cases, Mr. J. observes, it has proved to be of considerable efficacy where other remedies had been tried in vain, and where the disease was of some standing.

"Out of the first twenty-one cases in which I prescribed it, taken indiscriminately as they occurred, fourteen were cured, four relieved, and in three it failed. Of those in which it appeared to afford only a partial relief, the want of complete success may fairly be attributed to some irregularity or inattention in the patients' mode of living, or to a carelessness in taking the medicine. Nevertheless, one important advantage has appeared to me to be derived in these cases from the administration of the Cubebs, which is, that the symptoms afterward yielded with greater facility to copaiba than under ordinary circumstances." 19.

Although there appears no good reason why Cubebs should not be combined with other medicines in gonorrhœa, yet

Mr. Jeffreys did not find that any material advantage was derived from the combination. When the more urgent symptoms were allayed, the cure appeared to be accelerated by a mildly astringent injection. Gleet, one of the most common and intractable sequella of gonorrhœa, under ordinary circumstances, will be found, Mr. J. thinks, a less frequent consequence of the disease when it has yielded to Cubebs. Mr. J. administered the medicine in water, the patient being, in every instance, enjoined rest and an abstemious diet—an injunction but seldom strictly attended to. The dose, we observe by the cases, was from a drachm to a drachm and a half, three or four times a day.

"Upon the whole, I trust I have adduced sufficient facts to convince the candid reader, that, although the Cubebs pepper may not be entitled to the rank of a *specific* in the cure of gonorrhœa, it has nevertheless a better claim to that distinction than any medicine that has hitherto been made use of in the treatment of the complaint; and that, at any rate, it furnishes the surgeon with a remedy of great power, which may be applied in all cases without risk, and in many with a fair chance of a *speedy* and *permanent* cure." 22.

The cases, which are 27 in number, appear to be faithfully detailed, the unsuccessful as well as the successful—a mode of conduct which is very praiseworthy. Our author, at the end of the cases, informs us that, as far as he has hitherto been able to ascertain, there is no symptom attending gonorrhœa which contra-indicates the use of Cubebs." He has not scrupled to prescribe it in all the stages, and under all the circumstances of the complaint, without seeing any reason to repent of so doing. He considers it absolutely necessary that the Cubebs should be freshly powdered, and free from adulteration. It is of great importance also, that the medicine should not be left off too soon after the symptoms have disappeared.

As it is not consistent with our plan, or the space allotted to this article, to enter on any analysis of the cases, we refer our readers for further information, in detail, to the work itself, which is characterized by plainness of narrative, freedom from affectation, and apparent candour of detail. These are all which we can look for, in a publication of this description, and all, we believe, which the author himself aims at.

III.

I. *Transactions of the Physico-Medical Society of New-York.* Vol. I. 8vo. pp. 446.

"Primoque medendi scientia sapientiæ pars habebatur; ut et morborum curatio, et rerum naturæ contemplatio sub iisdem auctoribus nata sit: scilicet iis hanc maxime requirentibus, qui corporum suorum robora quieta cogitatione, nocturnaque vigilia minuerant."

CELSUS.

II. *The Philadelphia Journal of the Medical and Physical Sciences.* Supported by an Association of Physicians, and edited by Dr. N. CHAPMAN. No. I, for Nov. 1820, 8vo.

THE great utility of medical associations is now universally acknowledged. The discussions which take place among the members themselves are often highly interesting, and tend strongly to excite the minds of all present to the acquisition of knowledge, and to reflection on the topics discussed. The publication of transactions again, when properly conducted, diffuses the benefits of these societies far beyond their original limits; and through the medium of periodical works, they become the public property of the profession throughout the world.

The Physico-Medical Society of New-York is constituted on nearly the same principles as the Medical, and Medico-Chirurgical Societies of London, with the addition of a "committee of abuses." Whether such a committee can ever become operative or useful, in the present frame of society, we have much doubt. That *abuses*, in various senses of the word, exist among the profession in our own country, it would be in vain to deny; yet we hope to see the day when they will be much less common than they are at present. We hope to see the day when *public sentiment* will very effectually check the prominent operations of illiberality, jealousy, dishonesty, disingenuity, and selfishness, which disfigure occasionlly a noble and beneficial science—while *general diffusion of knowledge* shall render charlatanism, ignorance, and indolence, such conspicuous objects that they will gradually hide their heads. To accelerate so desirable an event, however, it is necessary that the opposite virtues to the above vices, should not only be inculcated by precept, but exhibited in example.

Periodical literature flourishes on both sides of the Atlantic. Among the numerous candidates for periodical celebrity a new one burst, or rather *aborted*, into existence, a few months ago, in this metropolis, with the professed

view of uniting physic and politics—pathology and plays—metaphysics and farces, "in all the mazes of metaphorical confusion!" The literary bantling was ushered into the world rather before its time, by a favourite protegée of that *discriminating* and *kind-hearted* patron of *osteological* science—the PETRIFIED SKELETON in the British Museum, who, it is said, "grinned horribly a ghastly smile," when a "TREATISE ON RICKETS," superbly done up in a *marble* cover, was laid at his *feet*—we beg pardon, at the ruins of his *metatarsal* bones—by the learned, and very *sensible* author. Whether it was owing to the *cold* reception of DOMINI SKELETON, or the satirical remarks of impertinent reviewers, we know not—but certain it is, that the *dedication* page was violently disrupted from its place, and consigned to the *flames*—where doubtless it received a *warmer* reception. As for the literary abortion, the Medico-Politico-Theatrico-Metaphysical Newspaper that—

"Monstrum horrendum informe cui *lumen ademptum*,"*

it shared the fate of the dedication to the skeleton in a few days after its birth.

But it seems that it is on American soil only that periodical medicine can come to perfection. "Controlled by hostile feelings (says our cotemporary at Philadelphia) and the *meanest jealousies*, the most enlightened nations of *Europe* perpetually offer proof of a mutual spirit of injustice, in the suppression or depreciation of each others' merits—and more particularly in relation to medical improvements. Too neutral in our position to be warped or influenced by such considerations, *we* are, in this case, the *best* prepared to institute a candid inquiry, and pronounce a just and *impartial* decision." Well, gentlemen, be it so! Far is it from our wish to disturb your happy dreams of optimism, or presume to question the very "*impartial decision*," with which you commence your judicial proceedings. All we can say is this, that if you judge of the British faculty by the sarcastic questions of the northern Athenian, which you have adopted as your motto,† you have imitated the French pri-

* It is a curious fact that the Medico-Political Newspaper in question, did actually agree with Ulysses's blinded Cyclop, in having but one eye—or rather the socket of an eye, and that in the middle of its forehead In the dark orbit of the newspaper a snake is seen prowling about, and instead of the intellectual light within, a few glimmering stars are set around it, to render "darkness visible."

† The Philadelpha Journal prefixes the following motto to its first number:—"In the four quarters of the globe, who reads an American book

soner who, viewing from his PONTON in Portsmouth harbour the *ladies* on Point Beach, drew from thence his picture of female society in England.* In truth, the medical philosophers of this country are not such politicians as often to mix up national prejudices or antipathies with their medical tenets or researches. As far as we ourselves are concerned, we can assure Brother Jonathan that we read his books whenever we can get them, nor have we the slightest wish to rob him of a particle of his reputation. It is true, that we do not put ourselves in a fever about ascertaining the exact period and place when and where an idea was first started, or a fact first discovered. All we want to know is, whether it is or is not a useful idea or fact—and if the former, how best it may be sent diffusively among the profession.

We may here notice the great noise made in this and other countries by some men whose critical researches enable them to discover, from time to time, that many opinions or facts, now considered new, were known in former times. If these men would only look into the book of Nature around them, or the passing stream of existence, they would soon see how inevitable it is that new things should grow old, and old things turn up again as new. This is the lot of every thing on earth—moral and physical. The human mind can embrace, and the human memory retain, but a limited range of knowledge—like the eye, while we travel round this globe, losing one horizon as it gains another. It follows, therefore, that in descending the stream of time, a portion of our knowledge is constantly sinking into oblivion, to make way for new accessions to our stock. If it be objected, that it does not pass entirely out of our reach, since it is chronicled in the records of the age in which it flourished; we answer that, to the great mass of society it is virtually lost, when it requires more time than they can spare for the recovery of it from the dusty annals in which it is buried, amid boundless rubbish. To us, indeed, it appears to be a matter of perfect indifference (as

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or goes to an American play? or looks at an American picture or statue? *What does the world yet owe to American physicians or surgeons?*"—Edinburgh Review, No. 65.

* We were lately not a little amused to see an American journalist seriously analyze and highly laud the wretched production of one of the most noted charlatans in this metropolis! We will not wound the feelings of the transatlantic critic, or feed the vanity of the cisatlantic quack, by mentioning the name of either.

far as practical utility is concerned) whether a fact or opinion, *not generally known*, be rescued from the mouldering tomes of antiquity by erudite research, or elicited from the collision of existing circumstances, by plodding industry. We consider both parties as *discoverers*, though one travels *backwards* and the other *forwards* in quest of the prize. In both pursuits the mind is exercised, and that is the main object after all.

I. *Gastrotomy.* In the Philadelphia Journal there is a *lengthy* article (nearly sixty pages of small type) on rupture of the uterus, and the Cæsarian operation, by Dr. Dewees; a gentleman of whom we have more than once made honourable mention in this Journal. We cannot afford space for a regular analysis of this paper, which is principally ratiocinative and historical. Dr. D. combats the opinions of Dr. Denman,* and advocates gastrotomy under certain circumstances, which he endeavours to lay down as guides for our conduct.

Placing no reliance in the powers of Nature to effect a cure when the child has escaped into the abdominal cavity, he considers that nothing but *prompt* artificial aid can rescue the mother from destruction. The injury which the system sustains by this casualty, is not simply from the lesion of the uterus itself; but also from the additional evils which must follow from inflammation of the peritoneum. To be useful, therefore, we cannot be too early in the removal of the offending bodies from the cavity of the abdomen, since (our author asserts) there never has been a recovery where the fœtus has been allowed to remain. This distressing accident may happen, according to Dr. Dewees, under the following circumstances or modifications.

1st. When the laceration is confined to the body or fundus of the uterus, but penetrates the peritoneum, the child escaping into the abdomen.

2dly. Where the laceration extends only to the peritoneal coat, and the child does not pass into the abdomen. 3dly. Where the laceration is confined to the neck of the uterus and vagina, the child escaping into the belly. 4thly. Where the laceration is confined to the vagina alone, and the child gets into the abdomen. 5thly. Where the 1st and 3d varieties

* "When the uterus is ruptured," says Dr. Denman, "at the time of labour, both reason and experience show, that the patient has a better chance of recovering, by resigning the case to the natural efforts of the constitution, than by any operation or interposition of art."

are complicated with a descent of the intestines. 6thly. Where the laceration may be either in the fundus, body, neck, or vagina, but the child remains either entirely, or in great part, in the cavity of the uterus.

In our efforts to relieve the patient under this afflicting event, we find ourselves restricted to three general modes, viz. either to attempt delivery *per vias naturales*—by gastrotomy, or the Cæsarian operation—or leave the case to the efforts of Nature.

The first mode, though most agreeable to our feelings, is not always proper, or even practicable. Gastrotomy and the Cæsarian section are horrible measures; but when life is at stake, there is strong inducement for the medical attendant to propose, and the patient to submit to desperate attempts to save it. Where this is the only, and anceps remedium, the case should be candidly stated, that no after-blame may attach, and the responsibility should be divided by consultation with our brethren.

Having related several cases from different authorities, of the operation being practised with success, our author goes on to point out the mode to be pursued, under the varied divisions which he has made of ruptured uterus.

In cases similar to 1. of the scale, where the pelvis is well formed, but where the uterus contracts firmly, we should proceed to gastrotomy; for in this case the hand cannot be pressed through the uterus to deliver, *per vias naturales*. Where the uterus remains flaccid, however, there may be a possibility of delivering per vias naturales, and this may be attempted. Where the pelvis is deformed, with strong contraction of the uterus, we have no other alternative than gastrotomy.

In cases such as 2, or where the pelvis is well formed, but the uterus contracted, the only chance is gastrotomy, and then cutting through the peritoneal coat of the uterus, so as to free the child from it.

Our author goes on, very systematically, on paper, to lay down rules, which we fear will not be easily remembered or acted on in such trying scenes. But we leave the consideration of this subject to our obstetrical brethren.

II. *Paralysis.* In the same number of the Philadelphia Journal there are some cases related by Dr. Calhoun, illustrative of the use of the tourniquet in palsy. A patient was admitted into the Pennsylvania hospital with paralysis of the extensor muscles of the leg, arising from having slept four hours in a sitting posture, with one extremity crossed over the other, and awaking with the usual symptoms produced

by pressure on the sciatic nerve. The limb was partially insensible and incapable of motion or of supporting the weight of the body. After two hours these symptoms disappeared: but the extensor muscles of the foot continued paralytic, and the power of motion in them became quite lost.

"The conjecture that the quantity of blood in the paralytic parts was deficient, induced the application of the tourniquet, as an increase of circulation had been observed to follow its removal. The pressure was made for half an hour, so as to stop the pulsation of the artery on the top of the foot, and repeated four times a day. The perspiration of the foot increased during its application, and a glow was felt after its removal. The sensibility gradually returned to the skin over the ancle, (where it before had been lost) the power of motion succeeded, and in about ten weeks the patient was perfectly well." 132.

Another case occurred to our author, where, in four days after the application of the tourniquet, the disease began to abate. Dr. Calhoun goes on to analyze the effects of pressure by the tourniquet, in a series of experiments of which we shall offer some account to our brethren of the "old world."

The circulation being stopped by means of a tourniquet placed on the upper part of the arm, near the insertion of the deltoid muscle, the temperature fell from 97 to 92 degrees of Fahrenheit—the limb became livid—the power of muscular motion was weakened—sensation gradually became extinct, at the end of twenty minutes, when the experiment was terminated. This experiment was repeated several times, and with nearly similar results. On removing the tourniquet, increased sensibility was evinced by a pricking sensation, a sense of fulness, a sudden glow, and, in most cases, a speedy restoration of the power of motion.

All the powers of the limb, then, being reduced by pressure, increased excitability to the impression of the blood, and influence of the brain and nerves is the consequence, as appears from the increased sensation and temperature when the pressure is removed—"thus, by the frequent repetition of the operation, the palsy is cured." Pressure by the tourniquet has been applied to three patients affected with general palsy with good effect; but the remedy appears more peculiarly applicable to local palsy, where internal remedies are objectionable on account of their deranging the functions of the digestive organs.

III. *Hepatic Functions.* We now turn to the transactions of the Physico-Medical Society of New York, but

must pass over many articles which, though locally interesting to Americans, are not so much so here. Our readers are pretty well aware that we seldom notice theoretical articles in this Journal; and the reason is, because we can always fill our pages with more useful materials. We shall, in this place, however, glance at a physiological article in the work under review, because there is a very striking coincidence between the opinions of its author and of Dr. J. M'Donnel, in the January number of the Edinburgh Medical and Surgical Journal. The medical world know that the latter gentleman has laboured to show that a principal use of the liver is to assist the lungs in the decarbonization of the blood. Dr. Pierson has laboured to the same effect, in a paper read to the Physico-Medical Society, on the 5th of March, 1816. We shall introduce an extract to show the coincidence alluded to.

"The porta collects the blood that returns from the stomach, spleen, omentum, the whole of the intestinal canal, and the mesentery; a surface much greater than that of the whole body.

"This blood has undergone no change at the extreme vessels, like that which takes place on the skin; and is accordingly found to be darker, and to contain much more carbon than the rest of the venous blood.

"The liver is known to separate this carbon, and to discharge it in the composition of bile, of which it is the chief ingredient. Have we not reason, therefore, to believe, that an important use of this viscus is to decarbonize the blood? If it be said, that this doctrine of the function of the liver degrades this organ, from the rank of a secreting, to that of an excreting one, it is answered, that this conclusion does not follow; for it is not denied that in the process of digestion and chylification, and in its operation on the bowels, bile possesses the importance of a peculiar secreted fluid. In what instance, then, is the simple, but salutary economy of nature, more beautifully exemplified than in the process of forming, and the no less important manner of disposing, of the bile!

"I infer, that the liver acts as an assistant to the lungs in decarbonizing the blood, from the absolute necessity of such an assistant.

"The lungs, in the performance of this function, are affected by external circumstances; and are influenced by causes which are extraneous, and over which the system has no control. These are exercise, and the variations in atmospheric weight and temperature. Now, when we consider how precise the system is, with respect to the quantity of circulating carbon it will contain, without offence; and how liable this quantity is to fluctuate, from unavoidable causes, we should expect to find in the animal economy a contrivance, analogous to what chymists call a valve, or tube of safety; which would permit the escape of surplus carbon, and save the system from fatal injury. Such an office I conceive the liver to perform.

"From what has been said, is it not rendered highly probable that the liver is an organ of more consequence than has generally been supposed; and that, besides the relation in which it stands to the intestines, it also co-operates with the lungs? It is also probable, that, in the fœtal state, the liver supplies, in a measure, the place of the lungs.

"The meconium is, beyond doubt, produced by the liver, and is found in the intestines, during almost the whole period of gestation. By chymical analysis, it is found closely to resemble the adult bile, and to consist chiefly of carbonaceous matter. It is said, that the blood returned from the placenta, by the umbilical vein, is more florid than that in the umbilical arteries. This may be the case, and yet the liver perform the office of lungs; for the business of decarbonization may be, but in part, executed in the lungs, while the liver does the remainder, and perhaps the chief of it. Richerand is of this opinion." 107.

IV. *Efficacy of Emetics in Spasmodic Diseases.* Dr. Joseph M. Smith, in a paper read before the Physico-Medical Society, endeavours—

"*First.*—To show the inefficacy of the common mode of treating the spasmodic symptoms of hysteria and epilepsy.

"*Secondly.*—To exhibit the superiority of *emetics* as antispasmodics.

"*Thirdly.*—To inquire whether their use is not founded on the laws of the animal economy: and

"*Fourthly.*—To notice some of the diseases, in which they may be successfully employed." 130.

Dr. Smith much doubts whether the common antispasmodics, as assafœtida, castor, ether, valerian, opium, &c. mitigate in any degree hysteria—opium perhaps excepted. In plethoric habits, however, this last medicine is often objectionable.

"In plethoric habits, it is customary to bleed before administering opium. This plan is highly judicious. Bleeding will diminish local, as well as general plethora; lessen the impetus of particular determinations, and generally render the system more susceptible of the operation of medicine. Venesection, however, when it is most required, is sometimes either impracticable or extremely inconvenient, on account of the intractable struggles of the patient during the paroxysms, and the shortness of the intervals. When the operation is performed, and the other means duly employed, it is expected, that the convulsions will soon cease; but how often does it happen, that several hours elapse before they subside?

"The above observations are equally applicable to epilepsy, the clonic spasms of which are similar to those of hysteria, and demand the same treatment, notwithstanding they may arise from very dif-

ferent remote causes. Indeed, the remote causes of both disorders are generally disregarded, so long as the fits succeed each other with rapidity; the first object being to remove the spasms." 133.

The experience which Dr. Smith has had of the utility of emetics in hysteria and epilepsy, enables him to assert, with confidence, that they are more efficacious than any remedy ordinarily employed in convulsions. The rules to be observed in their administration are few and simple.

"If the paroxysms quickly succeed each other, the emetic should be given in divided doses during the intervals. No alteration of the symptoms will take place until the occurrence of nausea; after which, the spasms will be found less violent, and the patient will complain of sickness and languor. As the nausea increases, the spasms become still weaker, and the intermissions longer, and as soon as full vomiting occurs, the paroxysms cease to return. Such is the manner in which the convulsions generally disappear. In some cases, I have seen the fits terminate before vomiting was excited; and in others, noticed several slight ones after the contents of the stomach were ejected; but in no instance have I known vomition to fail in producing the desired effect. In general, between the fits, patients are rational; but it sometimes happens that they are delirious or comatose. When this is the case, there is some difficulty in administering the medicine; but in common, sufficient can be given to answer the intention. Under these circumstances, the first favourable change is a perfect restoration of sense and voluntary motion; the patient expressing great uneasiness about the stomach." 134.

Should the patient be plethoric, or evince much determination to the head, blood should be drawn from the arm, anterior to the exhibition of the emetic, which will render the convulsions more manageable. Should the convulsions manifest a disposition to recur, *post vomitionem*, a dose of laudanum or some antispasmodic will, in general, prevent them.

We shall not follow Dr. Smith through his *rationale* of vomiting in convulsive diseases. If we can ascertain the *quo*, we are not very anxious about the *quo modo*, in the removal of disease, especially where the latter is founded principally on conjecture.

Besides the spasmodic diseases already mentioned, Dr. S. thinks that there are others in which emetics may be advantageously employed, as in spasmodic stricture of the urethra, producing retention of urine, puerperal convulsions, convulsions of children, and tetanus. Of their utility in these diseases, however, our author does not offer any experimental proofs.

The action of vomiting exerts an amazing influence over almost every function of the body, and therefore if oppor-

usually employed, may be made a powerful item in the catalogue of medicinal agents. In respect to vomiting in epilepsy, three instances have come within our knowledge, where the attacks were considerably mitigated, although the emetics were administered in the intervals. We have also seen several instances where the mode and period of epileptic seizures were changed very much by repeated emetics. The suggestion therefore of Dr. Smith ought not to be despised, especially in those cases of epilepsy where a premonition is given the patient, allowing time for the administration of an emetic.

We shall return to the Physico-Medical Transactions in our next number. In the mean time we wish the society every possible success; requesting our brother editors of Philadelphia to erase from their Journal the ill-natured and illiberal interrogation of the Northern Critic, as not at all expressing the sentiments of the British faculty. At the same time, Brother Jonathan will excuse us if we just hint the impolicy of praising himself so immeasurably, as he will thereby leave no room for others to perform that friendly office on proper occasions.

IV.

A Treatise on Indigestion, and its Consequences, called Nervous and Bilious Complaints; with Observations on the Organic Diseases, in which they sometimes terminate. By A. P. W. Philip, M.D. F.R.S. Ed. &c. One vol. 8vo. pp. 363. London, 1821.

The number of works which have lately issued from the press, under titles nearly similar to the above, sufficiently prove that the subject is exciting more attention than formerly. On the Continent, as our readers well know, almost all fevers, and most of the acute eruptive diseases, are supposed to have their sources in the primæ viæ; while, in this country, almost every chronic complaint, as well as many of the phlegmasiæ, are traced, or thought to be traced, to the digestive organs. Although the most rational views and the soundest doctrines are sure to be perverted and misapplied by the less reflecting and less discriminating part of the profession—(and that must always be a very large proportion)—yet we are very far from approving that satirical levity, bordering on caricature, with which some people treat this highly important and interesting subject. Cher-

latanism and knavery deserve no quarter, and require the rod of ridicule; but well-meaning efforts at improvement, and undisguised opinions, however erroneous, are not, we apprehend, fit subjects for licentious criticism, or ill-timed wit.

If we seriously reflect that there are but two surfaces, the external and internal—or in other words, the dermoid and mucous expansions, on which all physical agents must make their first impressions, and through which they must pass in their way to all or any other parts of the system, we shall find but little cause to laugh at the supposed extravagance of those who attribute the origin of almost all morbid affections to changes, whether of function or structure, in the two surfaces above mentioned. Look at the great tribe of acute diseases, whose etiology and phenomena are more evident than those of the chronic, and you will perceive *disturbance of functions* in one or both of the surfaces in question, among the first, if not the very first, effects of the external morbid cause. Whether these causes radiate from the said surfaces to other parts of the system through the medium of nerves, blood-vessels, absorbents, or all three, may admit of dispute; but no one can deny the fact that they *do* radiate thence. Even in those diseases originating in moral or mental emotions, the functions of the mucous membranes and skin are among the very first to be deranged. In all points of view, then, the study of functional and organic lesions of the digestive apparatus is by far the most important to which the physician can apply himself. Unless we trace diseases through their earlier as well as ulterior steps, we shall be constantly travelling in the dark, and stumbling from one error to another.

In our last number, we gave a comprehensive view of those graver affections of the mucous membranes of the digestive organs, which come under the designation of Phlogosis and high irritation; but there is a wide range of functional affections of the stomach and associated organs, short, in most instances, of decided inflammation, yet consisting of irritation or deranged action that not seldom rises to or ends in phlogosis and change of structure, either in the viscera primarily concerned, or in those which are drawn into disorder through sympathetic association with them. These are treated of in the work before us under one comprehensive generic term—INDIGESTION, which Dr. Philip uses, not as synonymous with dyspepsia, but including it, and also what are termed bilious, nervous, and stomach complaints. From this annunciation our readers will readily perceive the extent of the subject embraced in the volume under review,

and be prepared to expect an analytical article of corresponding dimensions.

The work naturally divides itself into three parts, namely, the symptomatology, etiology, and treatment of indigestion; to which is added a fourth part, or chapter, on dyspeptic phthisis, and habitual asthma.

I. *Symptomatology.* It has long been observed, that the symptoms of indigestion are numerous and often anomalous beyond all hope or power of description. We shall not, therefore, in this analysis, advert to more than the prominent and less mutable traits of this proteiform malady. In the incipient stage of indigestion, the symptoms are such as seem to arise from the irritation of the food imperfectly acted on by the stomach, and of its own vitiated secretions. Those of the first class are chiefly flatulence, distention, eructations of oily, rancid, or putrescent character. These may continue a considerable time, without extending their influence to other parts of the system, or, in fact, preventing the enjoyment of otherwise good health. These symptoms may often be prevented or removed by a more restricted and regulated diet than before. When they are neglected, however, or when they are of a very obstinate character, the secretions of the stomach and bowels begin to suffer deterioration. The bowels do not act so readily as usual—are occasionally distended and tense—with clamminess of the mouth, and more or less whiteness of the tongue in the mornings. Even these symptoms will generally yield to some mild aperient or alterative medicine. But by degrees they recur more frequently, and begin to be attended with some depression of strength, which is usually the first thing which excites the attention of the patient. If the disease proceed, the mind partakes of these languors, and the patient finds that he is not equal to his usual mental efforts. He feels occasional despondency, and becomes more alarmed than necessary respecting his complaint.

"While the symptoms thus proceed, a change, sooner or later, takes place, which marks an important step in the progress of the malady. The alvine discharge begins to deviate from the healthy appearance: it sometimes contains uncombined bile, sometimes it chiefly consists of bile; its colour at other times is too light, more frequently too dark, and occasionally, at length, almost black; at different times it assumes various hues, sometimes inclining to green, sometimes to blue, and sometimes it is mixed with, and now and then almost wholly consists of, undigested bits of food. It often separates from the canal with more difficulty than usual, and leaves a feeling of the bowels not having been completely emptied. There

symptoms only mark a greater degree of what has been going on from the first." 12.

Our author believes, with reason, that the above change and variety of colour arise chiefly from the state of the bile —and "that if the colour of the alvine discharge be natural, we may generally infer that the function of the liver is duly performed." Certain kinds of diet, and even the remora of bile in the bowels, will occasionally alter the colour of the alvine discharges:—thus a milk diet produces lighter coloured fæces than one of animal food; yet these changes are but trifling, and hardly to be taken into the account. In indigestion the urine often throws down lateritious or white sediments, and sometimes exhibits on its surface a thin oily film, which may arise from imperfect assimilation of the food. In states of nervous excitement every one knows that the urine is limpid and in very large quantities.

"A remarkable sympathy between the state of the kidneys and intestines is often observed in indigestion, the urine remaining scanty and high-coloured, when the bowels are constipated; and flowing freely, and of a pale colour, as soon as a free discharge from them has been obtained. Even in those dropsical affections which supervene on this disease, it is common for all diuretics to fail, when the bowels are constipated, and for the operation of cathartics alone to be followed by a free discharge from the kidneys." 16.

The vicarious action of the skin, kidneys, and intestines, is well known. When the skin has become torpid in delicate children, the bowels will often discharge astonishing quantities, solid as well as fluid—and that even, when little nourishment is taken in. In such cases, our author has reason to think the inhalation by the skin to be inordinately great. He saw several gallons of water drawn off from a child ten or twelve years old, labouring under abdominal disease, re-collected in eight or ten days, although but little fluid had been drunk. The opposite state of the system is well illustrated by the cases of many gluttons, whose alvine excretions are not greater than those of temperate eaters, while the cutaneous transpiration is abundant.

"The sensible change in the appearance of the alvine secretions in indigestion, is generally attended with some change in the other symptoms. The bowels are more frequently variable, diarrhœa often supervening without any evident cause, almost uniformly followed by fits of constipation. These, the patient finds, cannot now be removed by the simple medicines which at first restored due action to the bowels, larger doses or more active medicines are necessary, and their effect corresponds with the previous state of the bowels. The discharge is generally unsatisfactory, something seeming to be retained. It is very often watery, or frequent small semi-

fluid, teasing, mixed with mucous, and sometimes streaked with blood, and after it has been repeated, often chiefly consists of mucus and a little blood, the passage of which is attended with much griping and bearing down, and followed by a constant desire of further evacuation. The patient takes more medicine, with the hopes of a freer effect, but he thus often increases the straining more than the discharge." 19.

The morbid contents of the alimentary canal now produce pains in the stomach and bowels, weight in the right hypochondrium, with distention there, or in the lower part of the abdomen, foul and clammy tongue, nausea, depression of strength, and remarkable despondency of mind.

The play of the morbid sympathies next becomes manifest, by affections of the head, the senses, or the muscles. These prey on the patient's mind, which reacting on the body, still farther debilitates the digestive organs, and aggravates the other symptoms. The chylopoietic viscera being no longer in a proper condition to supply due nourishment, emaciation necessarily succeeds, while the countenance, a true index of what is passing internally, becomes pale and haggard. Often at an early period there is decubitus difficilis of the *left*, more rarely of the *right* side. In the progress of the disease, the *decubitus facilis* is on the back with the shoulders a little raised. It is reasonable to expect that in derangements of the stomach and digestive viscera, those parts of the system most connected with them in function, will be those most severely catenated in disease. Thus the tongue and other parts of the mouth are variously affected from the commencement. Their secretions become thick and clammy, or deficient, or morbidly thin and copious.

"In some cases the tongue, in the more advanced stages, becomes clean, shining, and morbidly smooth, and at length, affected with aphthæ. This state of it is seldom observed, except when a considerable degree of fever has supervened, which is not uncommon at these periods." 25.

The skin, in protracted cases, often becomes dry and shrivelled, the surface being cold, the patient chilly, and bearing ill all atmospheric vicissitudes. The head often indicates undue determination of blood to that quarter, producing languid ophthalmia, tinnitus aurium, and sometimes throbbing of the temples, drowsiness, cephalalgia, giddiness, or stupor. The thoracic viscera are often particularly affected, as might be expected from contiguity of position, association of function, and connexion of nerves. Among the principal sympathetic phenomena are, dyspnœa more or less permanent, dry irritating cough, palpitation, pains in

various parts of the chest. At different periods of the disease, and after repeated derangements of the hepatic function, permanent tenderness on pressure is complained of about the cartilages of the right false ribs.

"This symptom never exists long and to any considerable degree without the pulse becoming hard, and it often at the same time becomes rather more frequent than in health. There is no other symptom of the disease before us to which I am so anxious to call the reader's attention as to what I have here termed a hard pulse, because on it much of the proper treatment seems to depend. It sometimes happens, especially when the tenderness in the epigastrium is considerable, that the pulse becomes such as would on all occasions obtain the name of hard; but more frequently the hardness is only to be distinctly perceived by examining the pulse in a particular way.

"Those who have been much in the habit of examining the different states of the pulse must be aware, that its hardness is most perceptible when a slight degree of pressure is employed. A certain degree, by greatly compressing the vessel, will give some feeling of softness to the hardest pulse, and a slight degree of hardness is not perceptible with the pressure generally employed in feeling the pulse. If the pressure be gradually lessened till it comes to nothing, it often happens that a distinct hardness of pulse will be felt before the pulse wholly vanishes under the finger, when no hardness can be distinguished in the usual way of feeling it.

"This is in no degree the case in a healthy pulse, nor even in the first stage of the disease we are considering. But when the tenderness of the epigastrium is at all a prominent feature, it may always be perceived, that is, there is then a certain degree of pressure, sometimes very slight, under which the pulse gives a decidedly wiry sensation to the finger, the degree of pressure, under which the hardness may be perceived, denoting its degree." 29.

This concurrence of epigastric tenderness and hard pulse our author considers as the commencement of a new or second stage, wherein the nature and treatment of the disease are changed. The epigastric tenderness may readily be recognised, but the minute distinction of pulse, we fear, is but little calculated for the general *run* of practice, however useful for those who attend minutely to every phenomenon connected with disease.

With the two symptoms above mentioned, there are generally others ushered in, indicative of febrile movements in the system. The chilliness long complained of is now sometimes interrupted by languid and oppressive flushes of heat —the hand and feet often burning, particularly in the early part of the night—with increase of thirst, and sometimes partial morning sweats.

"When the tenderness of the epigastrium and hard pulse are

considerable, there is generally more or less an inability of exercise, except of the passive kind, much active exercise producing an insupportable languor. Slight degrees of the above symptoms are generally unattended by this inability." 30.

Epigastric tenderness generally ends in epigastric and hypochondriac fulness, and even some degree of firmness, with pain passing in various directions on pressure.

Such is the regular course of what our author has observed in the first and second stages of indigestion, independently of the remote or sympathetic affections of distant parts, which too generally spring up during the progress of these two stages. In the first stage of indigestion, Dr. Philip considers these as purely nervous, disappearing as soon as their causes cease to operate. In the second stage they become more and more parmanent; "and in the same proportion, more independent of the original disease, till at length they cannot be removed without an appropriate mode of treatment directed to the part secondarily affected."

In all these affections, as our author justly observes, both the sanguiferous and nervous functions are involved, and this cannot continue long without change of structure. They are therefore the immediate forerunners of organic disease, and if they cannot be arrested, the last stage of indigestion is established.

"For it is a curious fact, and one of the greatest importance in the treatment, that the organic affection rarely takes place in the original seat of the disease, but in other organs with which the stomach sympathizes, the liver, pancreas, spleen, mesenteric

having spread from the liver to them, for the former to recover, or nearly recover its healthy state. Symptomatic disease, when completely established, seems to act on that which excites it, in the same way, though much more effectually, in which artificial drains are found to do, while the sympathetic affection which precedes the establishment of actual disease, tends to increase the original derangement. · Thus also an extensive external disease, as I have witnessed, occurring in such cases, will often save the vital organ even after the disease has made considerable progress in it." 36.

We are no more able to explain why, by artificially excited external disease, we can so feebly imitate the effects of a spontaneous occurrence of it, than why a spontaneous sweat carries off fever, while one produced by art often brings little, or but partial relief.

Indigestion, then, according to our author, may be divided into three stages:—the *first*, characterized by the various symptoms described, as arising from undigested food, and the irritation of vitiated secretions:—the *second*, characterized by tenderness in epigastrio, and a degree of hardness in the pulse, often accompanied by febrile symptoms:—the *last*, by symptoms of organic disease in the head, chest, or abdomen.

We have some doubts, in our own minds, whether Dr. Philip be *pathologically* correct in separating the second and third stages. To us they appear the same in kind—that is, we conceive that the structure begins to suffer from the commencement of the second stage, and consequently that there are, pathologically, but two stages, the functional and organic; each stage having its various degrees of advancement, according to the length of time it has continued. In a therapeutical point of view, however, we have no objection to Dr. Philip's arrangement.

The relative duration of these different stages of indigestion, as well as the severity and nature of their symptoms, is very various. In its ulterior stage, too, it assumes a great variety of forms, according to the organ or texture organically and sympathetically affected.

"And it tends still further to perplex the symptoms, that in some cases the disease proceeds in more than one organ at the same time, the affection of the one not arresting that of the other, as we have seen, sometimes happens." 44.

In every stage, in short, there is endless variety, and the nearer it approaches the fatal termination, "the more its different cases assume the appearance of diseases which have nothing in common." The reason why one part should be sympathetically affected, in preference to another, is pro-

bably because it is weaker, and more predisposed to disease in general—at least we can form no other conjecture.

When gout is excited, as symptomatic of mal-function of the digestive organs, Dr. Philip considers it as tending less to derange the system in general, and more productive of relief to the primary disease than most of the other symptomatic affections.

"Hence appears the danger which attends interrupting the regular fits of gout, the sympathetic disease being prevented from taking the course which the disposition to affection of the extremities gives it, seizes on the part, generally an internal one, which next to these is most liable to disease; and on the other hand, if any thing so affects any of the vital parts during a fit of gout as to render it considerably the weakest part, the sympathetic disease sometimes leaves the joints and seizes on the internal part, producing what is called retrocedent gout. It is evident that the risk of both these accidents will be greatest, where the powers of the system are most impaired." 47.

In respect to the connexion of indigestion and urinary gravel, we exhibited a full account of Dr. Philip's observations and experiments at page 623, *et seq.* of the first volume of this Journal, while reviewing the 6th volume of the College Transactions; we need not therefore repeat them here. As to the third stage of indigestion—namely, that in which it has produced organic affections, it is foreign to our author's purpose to enter into its minute consideration, as it would lead to an investigation of a "large proportion of all the most serious diseases to which we are subject." Towards the close

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order. The evil thus increasing in a kind of geometrical ratio the whole powers of the system, in severe attacks, often sink with a rapidity which, at first view, appears unaccountable. It appears to our author that the function of the stomach may be deranged by causes which either affect its secreting power, so that the proper chymical changes are no longer effected, or debilitate its muscular power, so that the food, though digested, is not regularly propelled into the duodenum. Among the chief causes of indigestion acting directly on the gastric muscular fibre, may be enumerated narcotic and other offensive substances received into the stomach, as opium, tobacco, distilled spirits, or matters of an acid or putrid nature generated in the organ itself. *Morbid distention* of the stomach is regarded by Dr. Philip as one of the most frequent and powerful causes of indigestion—and *that* is generally produced by eating too fast:—

"For the appetite only subsiding in proportion as the food combines with and neutralizes the gastric fluid, previously in the stomach, when we eat too fast, time is not given for it to combine with that part of the food which is presented to it, till so much is taken that the whole gastric fluid, which the stomach is capable of supplying during the digestive process, is not sufficient to effect the due alteration on it; whereas, when we eat slowly, so that a proper time is given for the combination to take place, the appetite abates before the stomach is overcharged; for while digestion goes on, and the gastric fluid is only supplied in proportion as fresh food comes in contact with the coats of the stomach, it combines with the food as it is formed, and never excites the appetite." 76.

Every one knows that an interruption of ten or fifteen minutes, in the middle of a meal, will sometimes remove the desire for more food; and it is for the same reason that a few mouthfuls taken a little before dinner, will often wholly destroy the appetite, especially in delicate people, in whom the gastric fluid appears to be secreted in small quantity, or of inactive quality. Another frequent cause of over-distention is high seasoning and great variety of food; which either induce us to eat too long, or excite a greater supply of gastric fluid than the food calls for, by which the appetite is prolonged. The latter is exemplified in the effects of wine drunk during dinner. The degree of distention, too, depends much on the *kind* of aliment. All food swells more or less, from the heat and moisture; but that which is most difficult of digestion swells most. Over-distention of the stomach, however, must prove injurious to the nerves of that organ, and thus produce that peculiar pain, restlessness, and sense of oppression, which attend an over-distended stomach. "Such irritation of the nerves of

a secreting surface cannot exist without affecting its secreting power." The gastric fluid therefore becomes less fitted for its functions, and thus the distention is increased. There are many causes, however, which derange the nervous power of the stomach, and thus vitiate its secretions, by impressions made wholly on the nervous system, and only secondarily on the muscular fibres of the stomach. Among these are reckoned violent passions of the mind, too close application to study or business, excessive venereal indulgences.

"Strong impressions of the mind often instantly destroy the appetite, by occasioning such a secretion of gastric fluid as, not possessing healthy properties, at once itself fails to apply the due stimulus to the stomach, and tends to vitiate the effect of that which had been previously secreted." 80.

In intoxication the stomach would appear to suffer not only from the over-excitement of the inebriating fluid, but in consequence of the cerebral disturbance produced by the same cause.

"Similar observations apply to a moist, cold, and variable atmosphere. The stomach not only suffers by the general debility and relaxation induced on the nervous, and, through it, on the muscular system; but also by the peculiar effects of such an atmosphere on the office of the skin. Thus, too free a use of calomel and other medicines which powerfully affect the abdominal secretions, not only injures the stomach by their direct effect on this organ, but by the disorder excited in parts with which it immediately sympathizes. So extensive, indeed, are the sympathies of the stomach, that whatever greatly disorders the function of any important organ, may be ranked among the causes of indigestion; its tendency to produce this disease being proportioned to its degree, and the degree of sympathy which exists between the stomach and the part primarily affected." 82.

Affections of the bowels, bladder, urethra, head, or other parts, will sympathetically produce derangement of the stomach. There can be little doubt also, that *hereditary* predisposition to indigestion has its weight in the scale of causation.*

The *immediate* causes of a disease, according to Dr. Philip, are the states of body induced by the remote causes, and from which all the symptoms, more or less, directly arise.

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* "All the viscera," says M. Merat, "are linked together by a general sympathy, (consensus general,) and therefore affections of the brain, lungs, womb, bladder, &c. act on the digestive organs, and interrupt the process of digestion. The *skin* also reacts strongly on the stomach."—*Dict. des Sciences Med. Tom.* 24

This, in fact, is the disease itself. It is evident, our author thinks, that the causes of indigestion must necessarily affect either the muscular or nervous power of the stomach, or both, on which its functions depend.

"As the food can only be regularly propelled into the duodenum by the due action of the muscular power of the stomach, it is evident that, if this fails, oppression and distension must ensue; and if the due secretion of the gastric fluid depends on the healthy state of the nervous influence of the stomach, its properties must be affected by any cause disordering this influence, and the food, consequently, will not be duly changed by it." 88.

Dr. Philip is of the same opinion with some of our ablest physiologists, as mentioned several times in this Journal, that nervous sympathy is produced, not by the communication of nerves *in their course*, but through the medium of the sensorium.

"These and various similar facts, as far as I can judge, leave no room to doubt, that nerves sympathize only from their connexion in their common source, and that the numerous connexions we observe in their course are only useful in the same way with the ganglions and plexuses, which may be proved by direct experiment, to enable the influence, descending from that source, to pass from one nerve to another, so that one may partake of that which is conveyed by many, a power, which it may also be shown, is necessary to the continuance of life. That the phenomena of sympathy depend on changes in the source of nervous influence, might be proved by the fact alone, that sympathetic feelings still continue to be referred to a limb which is lost." 93.*

When the causes of gastric disease are comparatively slight, their effects on those parts which strongly sympathize with the stomach, may yet be very considerable, while on others they are hardly to be observed. "Thus, the effects of irritation of the stomach appear in the liver, the skin, the head, when they are not to be perceived in other parts; but as the disease increases in violence, they become sensible in every part." These observations are confirmed by the long-known success which attends the treatment of many cutaneous diseases, by remedies and regimen adapted to the improvement of the digestive organs.

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* Mr. Charles Bell very aptly illustrates this doctrine in his lectures, and those who carefully observe the phenomena of mordid sympathies, will be convinced of its truth. "I may here state it as my belief," says a recent writer, "that all sympathies are produced primarily through the medium of the nervous system—not from *connexion* of nerves, but through the brain." *On Derangements of the Liver, &c. p. 9.*

Dr. Philip endeavours to elucidate the pathology of the second stage of indigestion—namely, when epigastric tenderness and the hardness of pulse, before alluded to, have manifested themselves. These symptoms, he thinks, "indicate inflammation or a state approaching to it." He considers it therefore a point of considerable importance, in the treatment of this disease, to ascertain the nature and seat of the epigastric tenderness.

"It is evident that of the different parts of the stomach the pylorus is the one most exposed to the causes of irritation. Other parts experience the irritating effects of different portions of its morbid contents, but the pylorus is necessarily exposed to those of all. All must pass by this orifice. When therefore we see that, after indigestion has continued for some time, a certain part of the region of the stomach becomes tender on pressure, we cannot help turning our attention to this part. Now in the natural situation of the viscera, exactly in the tender part of the epigastrium, the pylorus lies, with the thin edge of the liver upon and in contact with it; as I have ascertained with the kind assistance of Mr. Brookes, whose anatomical skill is so generally acknowledged.

"When all these circumstances are considered, can we doubt that it is the irritated pylorus assuming a low degree of inflammatory action which occasions the tenderness on pressure above described; and when we consider what has just been said of the influence of juxtaposition in the spreading of this disease, can we doubt that when we find the tenderness with some degree of fulness gradually extending downwards, along the soft parts on the edge of the cartilages of the right side of the epigastrium, as we find it to do in the progress of indigestion, and at length ending in evident enlargement and tenderness of the liver, that the affection of the pylorus is communicated to the thin edge of this organ, with which it is in contact, thence by degrees extending to its other parts? Thus it is that of all the neighbouring parts no other so frequently partakes of this affection of the stomach. It is, doubtless, in the same way, that the habit of drinking spirits, which must apply so great a degree of irritation to the pylorus, seldom fails to produce affections of the liver." 105.

We do not see any thing unfeasible in the above pathological reasoning, either in a theoretical or practical point of view. Our author thinks there is reason to believe that the pylorus itself is more subject to organic disease than any other part of the stomach, inasmuch as it is more exposed to causes of irritation; yet that it has a greater power of resisting disease, in consequence of which, the diseases propagated from the pylorus to the liver, "more readily take root there, (in the liver,) and the structure of this organ yields to the affection which that of the part, from which it receives it, generally resists."

"The liver indeed is here already disposed to disease, its action we have seen from an earlier period, having by sympathy been influenced by the state of the stomach, and the continuance of diseased action, we know, disposes to disease of structure." 106.

Dr. Philip believes, with Dr. Yeats, that fulness and tenderness of the right hypochondrium do not always indicate liver affection, but that, on the contrary, they sometimes depend on the state of the duodenum.*

"The feeling given to the hand by the distended duodenum is different from that produced by the gorged liver, and in the former case the chief fulness is generally lower down, and does not seem to proceed so immediately from under the edge of the thorax as general fulness of the liver does; so that, even where, from more permanent debility of the duodenum, its morbid distention is a more constant symptom, the two cases may generally be distinguished." 107.

Upon the whole, then, our author refers the *epigastric* tenderness to an inflammatory affection of the pylorus, excited by the passage of the irritating contents of the stomach, for a longer or shorter time—a tenderness which is generally confined, at first, to a space not larger than a shilling.

III. *Therapeia.* The great utility of etiology is its application to therapeutics; for the mainspring of curing a disease consists in the subduction of its causes. In the *first* stage of indigestion, then, our primary indication "relates to diet and exercise both of mind and body," a strict attention to which, in the slighter cases, with a mild aperient, will often effect a cure. For reasons pointed out before, "to eat moderately and slowly, is often found of greater consequence than any other rule of diet." The first feeling of satiety should, of course, be attended to by the dyspeptic patient; "a single mouthful taken after this, oppresses a weak stomach." Certain kinds of food, however, will generate flatus, or run into fermentation, with every precaution as to quantity. These, which are found out by individual experience, must be guarded against.

"Acescent, and oily articles of food, with a large proportion of liquid, compose the diet most difficult of digestion. It would appear that a feeble gastric fluid, as indeed we might *à priori* suppose, does not admit of being greatly diluted without having its powers much impaired. The diet opposite to this, then, is that which agrees

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* See our review of Dr. Yeats's paper, in the 4th number of this series, *p.* 639, *et seq.*

best with dyspeptics. In the first stage of indigestion, a diet composed pretty much of animal food and stale bread is the best." 121.*

All mucilages being of difficult digestion, and young animals containing more of this than old, the flesh of the latter is to be preferred. Vegetables are still more difficultly acted on by the human stomach, and must be used with caution.

"From what it arises that mutton is to most stomachs so much more easy of digestion than beef it would be difficult to say. Most kinds of game are of easy digestion. Fish, independently of the heavy sauce with which they are eaten, are, for the most part, less easily digested, than the flesh of land animals; and as they at the same time afford less nutriment, they are in both respects less proper for the food of dyspeptics; although from the white kinds being less apt to excite fever, they, like the animal mucilages, have obtained the name of light, a term which so often deceives with respect to what is most easy of digestion, that it is necessary to keep this explanation of it in view."

Of all meats, Dr. Philip considers the lean part of venison as the most digestible. Hare and partridge appear to be as much so as mutton. Pork and tongues, as most mixed with fat, are, *ceteris paribus*, most oppressive; and, of the poultry tribe, geese and ducks are least likely to agree with the dyspeptic stomach. New bread is well known to form a pultaceous mass which is, with difficulty, pervaded by the gastric juice. For many useful remarks on the kinds and the cooking of foods, we must refer to the work itself. We shall make room, however, for the following passage:—

"It is not generally known, that the most concentrated decoction of beef, so far from nourishing, will not, if unmixed with something solid, even allay the appetite. A person under my care was attacked with severe pain of the face when even the smallest quantity of any solid food was put on the stomach, a single mouthful of bread never failed to bring on the attack; and, as he at length refused all solid food, he was confined for some weeks to a strong decoction of beef; but, however strong, and in whatever quantity it was taken, it never relieved the calls of hunger, and he rapidly emaciated." 126.

In respect to liquids, it is certain that, when the various functions are in the due balance of health, but a small quantity is necessary—the inhalation by one set of vessels nearly compensating for the exhalation by others. But in indiges-

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"* The principles in human food," says Merat, "most nutritive and easy of digestion, are the farina of vegetables and gelatin of animals. In proportion to the abundance of these, is their utility in indigestion." *Dict. des Sciences Med Tom.* 24

tion a false thirst is often excited by the irritation of the undigested food in the stomach. An exclusive dogma has, of late years, been set up that no fluids should be used at meals:—this is just as erroneous as the opposite opinion, that we should drink with every mouthful, to dilute the food. The truth appears to be, that in perfect health, and when the skin is not acting beyond the medium range, a person feels little inclination for drink during the time of eating; but there are so few of us in this state of primitive health, that the rule is quite absurd when generally or universally applied. We must drink in moderation when we feel thirst, both at and after eating. We should like to see the advocate of *dry feeding* at dinner beneath a tropical sky! He would soon abandon his hypothesis—or at least the practical application of it.

"The best rules, I believe, which a dyspeptic can follow, are not to yield to every slight sensation of thirst, and when the sensation is considerable, to take but a moderate quantity, and that deliberately, for it is with drinking as with eating, if he swallows with too great rapidity, he will take too much." 134.*

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* Xenophon informs us, that (what he terms) the ancients seldom drank till the repast was finished; and Mr. Dodwell, in his recent travels in Greece, asserts that, to this day, the same custom prevails. "When the dinner is finished, a draught of wine is taken by each person."—Vol. I. p. 166. It is evident, however, that in the time of the Romans, and long before that period, drink was introduced at meals. We are informed by Persio that the Romans drank hot water at dinner as a luxury, and to excite the appetite and digestion.—*Ant. Persio del Bever caldo, &c. Venet.* 1593.

The following sentiments of Messrs. Hallé and Nysten will be found, we imagine, more agreeable to nature and truth than the eccentric dogmas of a certain school in this country.

"La quantité de boisson à prendre pendant le repas doit être en proportion d'autant plus grande ou moindre, que les alimens eux-mêmes sont plus secs ou plus humides; qu'ils se laissent plus ou moins aisément pénétrer par les liquides salivaires et gastriques; qu'ils forment, par leur viscosité, une masse plus ou moins tenace; qu'ils ont plus ou moins la propriété de distendre l'estomac et d'y séjourner un certain temps.

"Les boissons doivent aussi être prises en quantité plus ou moins grande, suivant les constitutions individuelles qui, en raison de leur degré de sécheresse ou d'humidité, présentent des différences très-grandes relativement à la quantité et au degré de liquidité des sucs salivaires et gastriques. Les personnes sèches et bilieuses, dont les organes sont très-irritables et dont la chaleur propre est plus ardente, dont les évacuations intestinales sont plus habituellement dures et sèches, qui sont ordinairement constipées, ont besoin d'une plus grande quantité de liquides aqueux et frais.

"La proportion des boissons aux alimens doit enfin varier selon l'influence des saisons et de l'état de l'atmosphère.

"On peut cependant poser en principe, 1° qu'une quantité de boisson

While our able author agrees with all the best physicians of this and other countries, that water is the best beverage, in a state of health, yet he is forced to acknowledge that, from the long prevalent habits of society in this country, "more or less alcohol is necessary to support the usual vigour of the greater number of people even in health." Nothing therefore could be more injudicious than wholly to deprive them of this support, when they are already weakened by disease." Dr. Philip considers cider as the best fermented liquor of this country, provided the acetous fermentation has not commenced. Perry usually contains too much mucilage—"the home-made wines are still more objectionable," as more disposed to acetous fermentation. The form in which alcohol does least harm is that of foreign wine. "The astringent property of port wine seems to give it a peculiar tonic power; and, if it do not constipate, there is perhaps no other wine so well suited to dyspeptics." Distilled spirits, though they increase digestion for the moment, induce debility by the over-excitement.

"A very moderate use of wine can hardly be said to be injurious; we see those who use it in this way, live as long, and enjoy as good health, as those who wholly abstain from it; and to some constitutions, independently of the effects of habit, it may be useful. I believe neither of these observations apply to distilled spirits, although, as already hinted, when the stomach has been greatly weakened by excess, so that it cannot digest any fermented liquor which has not been distilled; the effects of diluted spirits are often less injurious, than the total collapse of the system which ensues on wholly withdrawing the accustomed stimulus." 145.

A moderate use of black tea, and also of coffee, appears to our author to be innocent. Of this we have no doubt. Dr. Philip does not recommend fluids of a very high or very

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qui excède trop la mesure des besoins naturels, énerve les digestions et favorise les altérations spontanées des alimens qui séjournent dans l'estomac, surtout quand ce viscère a peu d'activité; 2°. qu'une quantité de boisson insuffisante prolonge le séjour des alimens dans la cavité gastrique, et entretient la sentiment de plénitude qui en est la suite. Mais il faut surtout, à cet égard, se mettre en garde contre l'habitude, qui outrepasse plus souvent la mesure qu'elle ne reste en-deçà; connaître, par son expérience, quelle quantité de liquide est la plus favorable; savoir que la soif que donne l'usage des substances sèches, en épuisant sur-le-champ les organes salivaires, n'est souvent que momentanée et se dissipe en peu d'instans par le renouvellement de la salive. Ces observations sont importantes pour ceux dont les digestions sont lentes, imparfaites; pour ceux qui sont sujets aux aigreurs, et chez qui les fonctions de l'estomac sont aisément troublées par la superfluité des liquides."—*Dict. des Sciences Med. Tom.* 3. *p.* 222.

low temperature. Both extremes he thinks injurious. He is not an advocate for eating little and often. Regular meals at stated intervals appear the best practice.

"It has appeared to me that with the generality of dyspeptics, to take three moderate meals in the twenty-four hours is the best rule. A few find four meals better. The last meal should always be taken a little before bed-time, and should never, particularly after the disease has continued for some time, consist of animal food. The dyspeptic should eat nothing in the intervals of these meals. There is no greater mistake than that he should constantly be taking something. This disturbs the natural process, and entirely prevents the recurrence of appetite, a certain degree of which is a wholesome stimulus to the stomach. The stomach by this constant eating becoming more and more debilitated, and every part by sympathy partaking of the debility, the patient wholly misapprehends the cause, and with a view to increase his strength still increases the frequency of his meals, till he hardly passes a couple of hours without eating. By such a practice, pursued for years, I have repeatedly seen debility of the stomach and a morbid irritability of the whole system established." 151.

On the subjects of exercise, air, and sleep, Dr. Philip makes many useful observation, which, however, are not particularly novel to the medical reader.

In respect to the medicinal remedies in this stage of indigestion, our author "attempts no other division than the simple one of those which act directly on the stomach and bowels, and those which influence them through other parts." To give any curative plan a chance of success, as we before stated, it is necessary not only to remove the causes, and prevent their re-application, but also to remove the more immediate effects of these causes, and thus prepare, as it were, the digestive organs for the operation of the remedial plan of treatment.

As the stomach and bowels are generally overloaded, when we first see a dyspeptic patient, our author consider an emetic, followed by some mild aperient, as usually a necessary preliminary. Of late years emetics have been too much neglected, and there seems a dread of them among patients as well as practitioners. They are certainly rough remedies, but they are very useful ones occasionally. Their repetition should be avoided as much as possible.

"When it appears that offensive matter still remains in the stomach and bowels after the operation of the emetic and aperient, which may be known by a sense of oppression and distention of these cavities, and by eructation of wind and ill-digested food, or of an acid matter, which is sometimes so acrid as almost to excoriate the

fauces; we must by gentle stimulants, particularly the distilled waters occasionally mixed with a small proportion of some aromatic tincture, endeavour to excite them to a better secretion; and at the same time by the use of correctives, more directly to alter the morbid properties of their contents." 174.

Acidities in the stomach must, of course, be corrected by alkalis; and although the generation of these acidities may be lessened, *pro tempore*, it cannot be wholly prevented by animal diet. Dr. Philip has repeatedly observed, that, on exclusive animal food, the contents of the stomach and the breath become very acid, as soon as the patient begins to feel disgusted with it.

If the pains and spasms arising from the irritating secretions of the stomach and bowels are not relieved by the above means, or aromatic tinctures in addition, then Dr. Philip recommends an opiate, either combined with, or followed by, an aperient, to obviate its constipating effects.

Diarrhœa must be restrained by opiates and absorbents—vomiting by the effervescing draught, "or a mixture of sulphuric acid, conserve of roses, and mint water, carefully strained." When these fail, Dr. Philip has known a pill composed of opium and camphor the most effectual remedy, together with blisters to the region of the stomach. Dr. Philip does not consider pyrosis as necessarily dependent on indigestion.

Having thus brought the stomach and bowels as nearly into a natural state as their debilitated functions will admit of, we are next to consider how their tone may be sustained. The remedies for this purpose are thrown into two classes by

absorption; I have found them decidedly serviceable when aromatics had failed. They are best adapted to those cases where a continuance of the disease has produced much debility, and consequent languid circulation, without much tenderness of the epigastrium, or hard pulse, or any sensation of burning in the hands or feet at night." 180.

External heat to the region of the stomach, and frequently renewed, is often of more service in relieving gastrodynia than internal heat. Warm water internally, however, is no bad remedy, when not abused by too frequent repetition. Very small proportions of opium, as two or three minims of the tincture, two or three times a days, "often prove highly serviceable in allaying morbid irritation," their constipating effects being easily counteracted. We have found pills composed of two grains of extract. col. comp. one grain of pil. hyd. one grain of Cayenne pepper, or some oil of cassia, with a quarter of a grain of opium, taken twice a day, or two or three of them at bed-time, prove exceedingly useful in the class of complaints now under consideration. Dr. Philip prefers the pulvis ipecacuan. comp. from two to four grains given every six or eight hours, discontinued and renewed from time to time. For what are termed, and perhaps not improperly, *nervous* symptoms, castor, myrrh, valerian, and assafœtida, afford temporary relief—especially to that palpitation which results from indigestion, provided no inflammatory disposition has supervened. But for the prevention of a recurrence of indigestion, "bitters and astringents are those on which we chiefly rely," their effects being increased by combining them with a small quantity of the stimulant before alluded to. Of the bitters, chamomile, orange peel, and wormwood, appear to be most devoid of stimulating principles. Calumba possesses this quality in a greater degree than gentian and cascarilla—cinchona most of all.

"All the foregoing bitters, if we except the bark, which is often oppressive to the stomach, are well suited to the first stage of indigestion; but in proportion as the second stage approaches, we find the less stimulating bitters answer better; and in the second stage, even the gentian, which, of those that deserve the name of stimulating, possesses, perhaps, the least of this property, is often too heating, and the bark in general cannot be borne, even for a few days. While in the earliest periods of the disease, when it supervenes on debilitated states of the constitution, and the stomach still retains considerable comparative vigour, a cold infusion of the bark is often the most beneficial of all bitters." 185.

Of astringents, which Dr. Philip thinks, must sometimes be resorted to, at the expense of correcting their effect on

the bowels, iron deserves the first place. "In chlorotic indigestion, combined with stimulants, it is the most powerful medicine we possess;" and there are, Dr. P. thinks, "few cases of indigestion in which it is not found more or less useful at an early period." Its good effects are increased by combining it with bitters and aromatics. Next to this, Dr. Philip considers the sulphuric acid as the best stomachic astringent, especially where sweating is too easily induced by exercise. The white oxyd of bismuth has lately been much commended in gastrodynia. Sarsaparilla is much esteemed by our author, though not so much in early stages, as in protracted cases. In the early stage, and while the disease is confined to the alimentary canal, mercury he conceives to be unnecessary, if not prejudicial.

Aperients, of course, hold a distinguished place in all stages of the disease. Our author has found none, employed merely for the purpose of supporting a regular action of the bowels, so generally useful as pills composed of ipecacuanha, compound extract of colocynth, and soap, taken occasionally at bed-time.

The stomach and alimentary canal may also be acted on sympathetically through the medium of the skin. Tepid and cold bathing, friction, blistering the epigastric region, and covering the same with stimulating and anodyne plasters, are useful auxiliaries, in the treatment of indigestion.

When the alvine discharge begins to deviate from the healthy state, the treatment becomes more complicated. The secreting power of the liver, and probably of the pancreas, participates in the derangement. We must now, therefore, combine with the foregoing remedies, such others as tend to "correct the morbid state of the liver." Mercury is our principal remedy in this case, and the great art consists in so managing its exhibition, that it shall produce as little injury as possible to the other parts of the system.

In the first stage of indigestion, there is no necessity that the remedy should enter the system. Its local effects on the primæ viæ and liver are sufficient. Neither should the medicine be long continued, even in this restricted manner, without attending to the state of the alvine discharge, and ascertaining the necessity for its continuance.

"In the more obstinate cases indeed where the disordered state of the liver constantly recurs at short intervals, it is better for a certain time to give a moderate dose at stated intervals, by which the alimentary canal will suffer less, as a smaller dose is required for the prevention of this state, than for its removal." 199.

In this early stage of indigestion, inunction is not neces-

sary. Calomel and blue pill are the two forms in general use—the former, most aperient, should be given when the bowels are most languid—the latter when they are more easily excited. "The blue pill is generally most oppressive to the stomach; the calomel most irritating to the bowels." But as small doses often hang in the bowels, so they are often more irritating than larger doses, which more quickly carry thmselves off. "The irritation of the bowels is most effectually prevented by taking an opening draught some hours after the calomel." Dr. Philip has known a warm mercurial plaster worn over the region of the liver, for months and even years, with great advantage, in cases rather obstinate than severe, "the symptoms constantly recurring when it was laid aside." The mineral acids, and in some cases dandelion, Dr. P. considers the best substitutes for murcury. But they seldom maintain a due action in the liver for any length of time. Finally, Dr. P. sums up thus:—

"The treatment of the first stage of indigestion, then, consists in promoting the due action of the stomach and bowels, by the various means which have been detailed, and correcting the secretion of the liver, if it deviates from the healthy state, by the occasional use of mercury; care being taken neither to employ it in greater quantity, nor for a longer time, than is necessary for this purpose, as its effects on the stomach and bowels are evidently in opposition to the other parts of the treatment." 209.

Treatment of the Second Stage. This stage generally does not take place till the function of the liver "has been disordered for some time, or its disordered state has repeatedly occurred." When this stage is established, "bitters and aromatics cease to give any effectual relief"—indeed, in many cases, they increase the feverish restlessness. More tonic medicines have still a worse effect.

"The patient often thinks that his disease admits of no relief, but from aperients, and particularly mercurial aperients, of the good effects of which he is always sensible, and, consequently, is very apt to fall into an excessive use of them." 211.

Dr. Philip considers that we should be guarded in the use of purgatives and mercurials, since, in the second stage, the epigastric tenderness and hard pulse leave little doubt that inflammatory action, or a state approaching to it, has there supervened. "Stimulating measures are therefore to be employed with more caution, and anti-inflammatory measures become more or less necessary." The application of leeches to the tender part of the epigastrium ap-

peared to our author to throw light upon the nature and treatment of the second stage of indigestion.

"The effects I found were not merely that the tenderness was relieved, and the pulse softened; but that the patient breathed and walked better, that the bowels were more easily moved, and the skin appeared more relaxed, the feverish tendency which frequently shows itself in the evening, being in the same degree lessened." P. 217.

But this was not all. On resuming the plan of treatment it soon appeared that the patient bore the use of tonics much better than before, and in some instances, a recurrence to the plan of treatment pursued in the first stage removed the disease. But such fortunate cases were comparatively few, "and a repetition of the leeches became necessary."

"Each repetition to the same extent generally produced less relief than the preceding, and if a larger quantity of blood was taken, the relief was obtained at too great an expense of strength.

"The application of a blister to the part from which the blood was taken, immediately after its abstraction, I found, tended both to increase the effect of the leeches and render it more permanent; but even with this aid their repetition in the more inflammatory cases soon became necessary. In those less inflammatory, blisters sometimes relieved the symptoms without the aid of leeches, but, like the leeches, they often failed to give permanent relief." 219.

The lighter bitters, as chamomile or orange peel, and even occasional aromatics, can still be borne, and a very little light animal food, as chicken once in two days, supports the strength better than a diet composed wholly of animal food. Where wine is given at all, it should be well diluted. If active inflammation be threatened, the diet must of course be reduced to its lowest ebb.

"In a few, particularly when a considerable degree of hardness of pulse, notwithstanding the use of the above means, continued, I have seen a diet wholly vegetable, and even a total abstinence from wine, which is much less permanently stimulating than animal food, strikingly beneficial. It is common for the appetite to improve on lessening the quantity of animal food. This depends in part on other food affording a less proportion of nourishment, but very much, I believe, on the tendency to fever being lessened by the change." 221.

The bowels are often not only torpid under the use of animal food, "but purgatives act imperfectly, and with great irritation." Vegetable diet frequently relaxes them, without the aid of medicine.

To obviate the inflammatory tendency in these cases, Dr.

Philip has found nothing equal to a very dilute solution of nitrate of potash, with a little gum. The latter seems to defend the bowels from the irritation of their contents.

"Eight or ten grains of the nitrate in an ounce and a half of water, with a twelfth or sixteenth part of mucilage of acacia, have been given three times a day, and repeated every hour or hour and a half, when the skin became hot generally, or the hands and feet began to burn. Two or three doses thus taken seldom fail to reduce the increased temperature, and relieve the restlessness which it occasions; and thus, simple as those means are, they often procure good nights, when the want of sleep, as frequently happens in this stage of the disease, is the effect of feverishness. The common draught, the sulphate of potash, and other medicines of this description have similar effects, but none of them appear to me equal to the above nitrate." 223.

In addition to these means a freer use of aperients will be necessary. Acrid or drastic purgatives are manifestly improper. If the inflammatory symptoms still continue to recur, Dr. P. recommends a perpetual drain, "established in the most tender part." As greater or less disorder of the liver is "a constant attendant on the second stage, we still find mercury by far the most efficacious." 225. In the earlier periods and milder forms of the *second stage*, the *local* effects of mercury, especially of the blue pill, kept up for some time, will often be sufficient, provided the antiphlogistic measures have been duly employed. "But in many cases, and in a large proportion of those of long standing, this effect often fails." Our author's plan then was as follows:—

"I have generally given a grain of the blue pill, sometimes only half a grain, twice or three times in twenty-four hours, till the secretion of bile appeared to be healthy, repeating these doses when it was again disordered; and by such doses, which may appear to many little better than trifling, I have seen the bile gradually restored to a healthy state, when larger doses had been employed in vain. They not only often succeed where larger doses fail, but the change, in proportion as it takes place more slowly, seems generally to be more permanent." 228.

That the above plan, which a good deal assimilates with that of Dr. Ayre, of Hull, may prove equally efficacious in the hands of others, we sincerely wish. In our own practice, which has not been very confined in these complaints, we did not trust to such cautious administrations of the remedy, and therefore we cannot offer an opinion on Dr. Philip's plan. We present it for the trial of our brethren. The doses of the medicine were so small that, to use the

author's own words—"if they did little good, nothing, at least, was to be apprehended from them:"—unless the loss of time, which, by the way, is sometimes of great consequence in such cases.

We can easily conceive, with our author, that—

"The beneficial effects of this plan appearing slowly at first, discourages the hopes of the physician, and, as I know, in many instances, has caused it to be laid aside." 230.

Dr. Philip avers, however, that twenty years' experience has convinced him of the utility of the measure. Diet, exercise, occasional cathartics, local blood-letting, blisters, and cooling medicines, must occasionally lend their aid to the foregoing process. When the blue mass irritates the bowels, extract of poppy, hyoscyamus, or conium, must be combined with it.

It is to the second stage that the substitutes for mercury are best adapted, particularly the nitric and hydrochloric acids, and the taraxacum.

"Much has of late been said of the external use of these acids. Both their internal and external use has appeared to me best adapted to cases of some continuance, where the inflammatory tendency has been to a great degree subdued, and small doses of mercury have been employed without the usual benefit. In such cases, I believe the use of the acids will almost always be found better than increasing the quantity of mercury beyond what produces the slightest indication of its presence in the gums. If the habit bear the mercury well, the acid may be used in aid of it; if not, or if the use of the acid, as sometimes happens, causes the mercury to irritate the bowels, the latter should be discontinued under the use of the

exercise of body, for which we must refer to the volume itself.

On the sympathetic affections occurring in other organs than the stomach, during indigestion, Dr. Philip makes also many interesting remarks, some of which we shall notice in a cursory manner. The nature of these remote affections corresponds with that of the stomach itself. In the first stage they are merely nervous—ceasing with the cause that produced them. In the second stage they are inflammatory, having an existence independent of that cause. These secondary symptoms of indigestion are most common in youth, and least so in advanced periods of life; *i. e.* after forty. The liver is generally the first organ to suffer, both in function and structure. It is not uncommon, therefore, in the second stage of indigestion, for the right hypochondrium to swell and become tender on pressure, with a sense of oppression and increased hardness of the pulse, often accompanied with some dyspnœa and dry teasing cough, together with a deranged state of the biliary secretion—"in short, the patient evidently labours under inflammation of the liver." For these attacks local bleeding, blisters, saline aperients, and the blue pill, are generally sufficient. Dr. Philip has seen the spleen occasionally affected as the disorder of the liver gave way, and vice versa.

The lower bowels are often sympathetically affected—partly from their consent with the stomach, and partly perhaps from the irritation of disordered secretions passing through them. In the first stage of the disease purgatives and anodynes are generally sufficient; but in the second stage there is an inflammatory tendency, characterized by fulness and tenderness in the hypogastrium.

"The sigmoid flexure of the colon appears to be the part most liable to be affected, probably from the contents lodging there longer than in other parts of the large intestines. It is not uncommon in protracted cases, to find a considerable degree of tenderness in the seat of this part, which is sometimes at length affected with ulceration. It is, also, probably for similar reasons, common, though not so much so, to find the tenderness on pressure in the seat of the cœcum." 261.

The application of leeches, and the use of mucilaginous and anodyne glysters, are most proper here; "and then mild aperients generally succeed in procuring a free action of the bowels."

The chest frequently suffers in the second stage of indigestion, but still oftener the head. The heart also is frequently affected sympathetically, and palpitation and other alarming symptoms produced.

"It is a common observation that carditis is apt to supervene after repeated attacks of rheumatic pains of the limbs. I believe from many cases which have fallen under my observation, that it will generally be found in such instances, that the rheumatic pains had been combined with, and in a greater or less degree dependent on, disorder of the digestive organs." 265.

Dr. Philip having now traced indigestion from its commencement to the moment at which it is about to terminate in organic disease, declines entering into this wide field, since to give any thing like a regular account of the structural changes in various organs resulting from long-continued disorder of the digestive apparatus, would require a larger space than the whole volume. He therefore singles out dyspeptic phthisis, a disease of which he formerly published an account in the Medico-Chirurgical Transactions, for the remainder of his treatise; but as it is only an amplification of the paper so universally known to the profession, we shall decline entering on it here.

Our readers must have remarked that the etiology, pathology, and treatment of the important class of diseases treated of in this volume, and of which we hope we have presented a fair analysis, are founded on *observation and experience*,* and not on any hypothesis connected with the experiments which Dr. Philip has made on the digestion of animals. Had his experiments, therefore, been negatived by the trials of others, such failure would not in the slightest degree, have affected the present volume. We are, however, in justice bound to state, that the experiments alluded to, and which have lately excited so much attention and discussion in the medical world, were recently repeated at the Royal Institution, in the presence of Sir Humphry Davy, Mr. Knight, Mr. Brodie, Mr. Broughton, Dr. Darling, and many other medical gentlemen, among whom was the editor of this Journal; and that Dr. Philips's statements were fully, unequivocally, and satisfactorily verified, without leaving the smallest doubt of their correctness on the mind of any one present. Mr. Brodie and Mr. Broughton, with that candour and liberality characteristic of great and philosophic minds, gave every assistance to Dr. Philip, and when the results were developed, most handsomely and ingenuously avowed their conviction of the truth of his former statements, and consequently the verification of his experiments.

* Some few parts of the pathology of indigestion are founded on *facts* ascertained by opening animals at various periods after eating, and therefore are not to be deemed hypothetical.—*Rev.*

As some curious phenomena became apparent during the performance of these operations at the Royal Institution, we shall here present a very succinct, but we hope intelligible, view of the state of the question, derived almost exclusively from what we ourselves observed.

As a preliminary we may remark that the stomach of a rabbit does not appear capable of completely emptying itself, however long the animal may fast; but on the introduction of new food, the latter occupies the centre, and the former the inner circumference of the muscular pouch. The old, or digested food, is then forwarded along the great curvature of the stomach to the pyloric orifice, while a layer of new food comes in contact with the organ—becomes digested in its turn—the layer or stratum is forwarded in the same manner as the other, and so on, layer after layer, till the stomach disgorges into the duodenum all that it is capable of sending there.

Now if three rabbits be kept sixteen or seventeen hours without food, then fed with green parsley, and the eighth pairs of nerves, in two of them, divided, in the neck, immediately after feeding, we have three subjects for experiment. In that rabbit which is *not* to be galvanized, a piece of each nerve must be cut out, for reasons which will presently appear. The inferior cut extremities of the nerves in the other animal are to be freed for a small space so as that a piece of tinfoil may be tied on each, and the two pieces of tinfoil joined together, so as to form a common conducting medium for the galvanism. The positive wire is to be kept in contact with this union of tinfoil, and the other wire kept in contact with a piece of silver at the pit of the animal's stomach. The wires are to be so managed as to keep such a stream of galvanism passing along the eighth pair as may cause a constant twitching of the fore legs. We shall soon perceive that the rabbit, with the nerves divided and allowed to run about, begins to breathe with difficulty, and with noise. The animal on the table, under the same circumstances, but galvanized, breathes easy and makes no noise, provided the laryngeal nerves are not so injured as to occasion a straightening of the glottis. In two or three hours after the division of the nerves, the non-galvanized rabbit makes efforts to vomit:—the galvanized animal makes no such efforts. If both animals live six, seven, or more hours, and are then killed, together with the third rabbit, which has undergone no operation, the food in the healthy rabbit will be found digested, and uniform in its appearance, and greatly diminished in quantity; nearly, if not exactly, the same appearances will present themselves

in the galvanized rabbit; while in the non-galvanized rabbit, the food will present one of two appearances, according to the length of time the rabbit lived after the nerves were divided. If the animal survive but a few hours, as four, six, or seven, a layer of the old food will be seen on the surface of the new,—the latter being quite undigested. If the rabbit survive fifteen, twenty hours, or more, the stomach will have got rid of its old food, and the whole of the new undigested food will be in contact with the stomach at all points; but there being no nervous or galvanic fluids to excite the secretion of gastric solvent, the parsley will be every where and uniformly undigested, and nearly in the same state, as when first masticated—at least it will merely be a little sodden, from the heat and moisture of the place where it had lain so long. Such being the state of things, the natural, and apparently inevitable, inference is, that the galvanic fluid, in the galvanized rabbit, supplies the place of the nervous influence, and furnishes the *exciting cause* of digestion in the stomach.

We are now to notice a circumstance which, we believe, gave origin to all the discussions and discrepancies of opinion which have appeared respecting this curious physiological question:—it is this. If the nerves of the animal are simply divided, but no piece cut out, or other means taken to prevent the divided ends coming into contact, or proximity, then an irregular but imperfect digestion takes place, and the experiment leads to no positive conclusion. This was the case in the first train of experiments made at the Royal Institution, and we believe this was the case also in the experiments of Messrs. Brodie and Broughton. From this it would appear, that while the cut extremities of the nerves are in contact or proximity, the nervous influence is transmitted, though imperfectly, along the original course of the par vagum, from the brain to the stomach, and a corresponding degree of digestion is carried on—the animal dying apparently from hydrothorax, with lungs perfectly collapsed; whereas, when the divided ends of the nerves are kept separate, there is no hydrothorax; but the lungs are so congested, as to retain the form of the chest after it is laid open. In the galvanized rabbit, on the other hand, provided the galvanism has not been long enough continued to produce inflammation, there is neither congestion nor hydrothorax, nor the patching on the surface of the lungs, which appears in both the former cases—but the lungs have a perfectly healthy appearance.

In one respect, Dr. Philip's opinions have been more or

less misconceived by, we believe, all who have publicly noticed them; although he has been at great pains both in his inquiry into the laws of the vital function, and in several numbers of the Journal of the Royal Institution, to explain this part of them.

In the former of these publications he first stated the facts from which the identity of the nervous influence and galvanism appeared a necessary inference. But his definition of the term nervous influence has been wholly overlooked in commenting on his opinions. Le Gallois is the first writer, as far as we know, who has attempted experimentally to distinguish between the sensorial and nervous powers. It appears to Dr. Philip, however, that the line of distinction which Le Gallois attempts to draw between these powers is incorrect, and he endeavours, by observing the process of dying, to draw one more consistent with the phenomena.

It appears from many experiments and observations detailed in his "Inquiry," that after the sensorial functions cease, where the animal is no longer capable of perception or any act of volition, and consequently is said to be dead, the nervous as well as the muscular powers still survive; although the former, from the ceasing of respiration, to which he has shown that the sensorial power is necessary, is greatly impaired. He has shown by repeated experiments that the nervous power is still capable of forming the secreted fluids, and of causing an evolution of caloric from the blood, as well as of exciting the muscles. He thus determines not only that the nervous power is distinct from the sensorial, but capable of its functions after the latter is withdrawn.

Those who have commented on his opinions have not only confounded what he calls the nervous with the sensorial power, but with the vital principle. In the 15th number of the Journal of the Royal Institution, he observes,

"Were it not for opinions, unaccountably ascribed to me, I should think it superfluous to add, that I have never regarded galvanism as having any thing in common with the sensorial and vital powers, as I have explained in the first, and still more fully in the second edition of my *Inquiry*. I only maintained that we have reason to believe that the nervous influence which I had, with much pains, and the assistance of many experiments, attempted to define; showing, that it survives the sensorial power, but is wholly incapable of its functions after the extinction of the vital principle, is a chymical agent: and that it is the same which operates in many similar phenomena which we know to be the effects of galvanism."

Dr. Philip conceives that his experiments prove, that the nervous influence, properly so called, performs no functions but such as are evidently the effects of a chymical agent, and, as he arrives at this conclusion before he begins to inquire into the nature of the chymical agent employed by nature in the production of the functions in question, it is incumbent on those who dispute his opinion, in the first place, to inquire how far he is successful in establishing this previous inference. If he be correct in thus limiting the operation of the nervous influence, and can prove that galvanism is capable of the functions to which he thus limits the nervous influence, the identity of these powers, as far as we are capable of judging, can no longer be doubted.

Besides, we have seen, in the experiments made at the Royal Institution, that the nervous influence is capable of passing along a nerve after its division. Now, after the division of a nerve, more or less moisture must intervene between its divided ends, even if every pains be taken to prevent it by adapting, as correctly as possible, these ends to each other; but, in the above experiments, no pains of this kind were taken; the divided ends of the nerves were merely allowed to fall into their place. Here then it is proved, that the nervous influence passed through water. This proves that it does not depend on a vital action of the nerve, and, we need not add, goes far of itself to establish the position of Dr. Philip respecting its nature. We here see it passing through a conductor of galvanism.

The readers of this Journal will have perceived that, in the foregoing article, as indeed in most others, we have pursued a strictly analytical path, and stated, in the last few pages, what we believe to be truth—and an impartial view of the physiological question, now, we hope, set at rest. Of the general merits of the work, we leave the public to form their own opinion, having set before them sufficient matter whereon to ground their judgment.

V.

A Dictionary of Chymistry, on the Basis of Mr. Nicholson's; in which the Principles of the Science are investigated anew, and its Applications to the Phenomena of Nature, Medicine, Mineralogy, Agriculture, and Manufactures, detailed; with an Introductory Dissertation, containing Instructions for converting the Alphabetical Arrangement into a systematic Order of Study. By Andrew Ure, M.D. Professor of Chymistry and Natural Philosophy in the Andersonian Institution of Glasgow. Octavo, 14 plates, pp. 1060. London, 1821.

Lexicographical systems of science and philosophy, from the peculiarities of their nature and construction, are obviously insusceptible of analytical concentration. Nevertheless, we shall endeavour to arrange a brief exposition of the more important of Dr. Ure's original essays; and, of these, shall select such only as possess relation to the objects of chymical and medical researches.

I. Chymical Sketches. *Chymistry*, in the language of Dr. Ure, is "the science which investigates the composition of material substances, and the permanent changes of constitution which their mutual actions produce." This general definition being premised, we proceed to direct the attention of our readers to some of the articles which relate to chymical science.

Acids. Dr. Ure embraces the chloridic doctrine of acidification, and regards it as being confirmed by the best experimental and inductive evidence. Finding the classification of other writers to be in many respects exceptionable, he proposes a new systematic distribution of the acids, wherein his chief object is to groupe together such of these substances as have analagous properties or composition. He places them in two general divisions. 1st. Acids from inorganic nature, or which are procurable without having recourse to animal or vegetable products. 2d. Acids elaborated by means of organization. The first groupe is subdivided into three families—oxygen acids—hydrogen acids—and acids destitute of both these supposed acidifiers. The acids of the last division are all decomposable at a red heat, and afford generally carbon, hydrogen, oxygen, &c. and in some few cases also nitrogen. The general properties of the acids are thus stated.

"1st. The taste of these bodies is for the most part sour, as their name denotes; and in the stronger species it is acrid and corrosive. 2d. They generally combine with water in every proportion, with a condensation of volume and evolution of heat. 3d. With a few exceptions, they are volatilized or decomposed at a moderate heat. 4th. They usually change the purple colours of vegetables to a bright red. 5th. They unite in definite proportions, with the alkalis, earths, and metallic oxids, and form this important class of salts. This may be reckoned their characteristic and indispensable property."

Much new and valuable information will be found in the articles where different acids are described. Among others, those on the arsenious, carbonic, fluoric, hydriodic, chloriodic, muriatic, nitric, prussic, or hydrocyanic, acids. Chlorocyanic, pyrolignous, sulphuric, and the hyposulphurous acids, contain details and tables by Dr. Ure, which are in a high degree interesting and instructive.

Alkalis. These are arranged, in the present work, into three classes. "1. Those which consist of a metallic basis combined with oxygen. These are three in number, potash, soda, and lithia. 2. That which contains no ammonia. 3. Those containing oxygen, hydrogen, and carbon: in this class are the vegetable alkalis. Besides neutralizing acidity, and thereby giving birth to salts, the first four have the following properties. 1. They change the purple colour of many vegetables to a green, the red to a purple, and the yellow to a brown. If the purple have been reddened by an acid, the alkalis restore the purple. 2. They possess this power on vegetable colours *after* being saturated with carbonic acid, by which criterion they are distinguishable from the alkaline earths. 3. They have an acrid and urinous taste. 4. They are powerful solvents or corrosives of animal matter, with which, as well as with oils in general, they combine so as to produce neutrality. 5. They are decomposed or volatilized at a strong red heat. 6. They combine with water in every proportion, and also largely with alcohol. 7. They continue to be soluble in water when neutralized with carbonic acid; while the alkaline earths thus become insoluble."

Attraction. This forms the subject of a disquisitive sketch containing many new and remarkable observations. We were much pleased to find here, for the first time, Dr. Young's tables of elective attractions introduced into an English system of chymistry, and accompanied with his admirable remarks on the sequences of double decompositions.

Calcium, the metallic basis of lime, has been investigated by Dr. Ure with his characteristic zeal. From his promised experiments, synthetical and analytical, we anticipate a further illustration of this difficult subject.

Caloric. An elaborate memoir from Dr. Ure's own pen, has been devoted to the illustration of this most important branch of physical science. Having shown "how little room there is to pronounce dogmatic decisions on the abstract nature of heat," he goes on to say—

"If the essence of the cause (caloric) be still involved in mystery, many of its properties and effects have been ascertained, and skilfully applied to the cultivation of science, and the uses of life. We shall consider them in the following order;—1. Of the measure of temperature. 2. Of the distribution of heat. 3. Of the general habitudes of heat with the different forms of matter."

An astonishing patience of research, an intimate acquaintance with all the thermological doctrines, an appropriate use of inductive ratiocination, and an elegant perspicuity of diction by no means common in scientific literature, are manifest throughout the discussion of these general heads. The monograph is concluded in these terms:

"I have thus completed," says the author, "what I conceive to belong directly to caloric in a chymical dictionary. Under *alcohol attraction*, *blow-pipe*, *climate*, *combustion*, *congelation*, *digester*, distillation, electricity, *gas*, *light*, *pyrometer*, *thermometer*, *water*, some interesting correlative facts will be found."

Chlorine, with its dependents, chloro-carbonous and chlorous acids, furnish the author with an opportunity of panegyrizing Sir Humphrey Davy, and of ascribing a complete ascendancy to the new doctrines of that distinguished philosopher. These papers contain a perspicuous summary of the chloridic system: they are written with great spirit, and bear ample testimony to the degree of Dr. Ure's professional zeal and the indefatigability of his research. We feel prompted to transcribe his prefatory observations.

"The introduction of this term," (chlorine,) he begins, "marks an era in chymical science. It originated from the masterly researches of Sir H. Davy on the oxymuriatic gas of the French school, a substance which, after resisting the most powerful means of decomposition which his sagacity could invent or his ingenuity apply, he declared to be, according to the true logic of chymistry, an elementary body, and not a compound of muriatic acid and oxygen, as was previously imagined, and as its name seemed to denote. He accordingly assigned to it the term chlorine, desc

colour; a name now generally used. The chloridic theory of combustion, though more limited in its applications to the chymical phenomena of nature than the antiphlogistic of Lavoisier, may justly be regarded as of equal importance to the advancement of science itself. When we now survey the Transactions of the Royal Society for 1808, 1809, 1810, and 1811, we feel overwhelmed with astonishment at the unparalleled skill, labour, and sagacity, by which the great English chymist, in so short a space, prodigiously multiplied the objects and resources of the science, while he promulgated a new code of laws, flowing from views of elementary action, equally profound, original, and sublime. The importance of the revolution produced by his researches on chlorine, will justify us in presenting a detailed account of the steps by which it has been effected."

Combustion is the subject of a memoir, than which we have not seen a better in any chymical system. It is distributed into six general heads, under which the phenomena of combustion are considered. "1. The temperature necessary to inflame different bodies. 2. The nature of flame, and the relation between the light and heat which compose it. 3. The heat disengaged by different combustibles in burning. 4. The causes which modify and extinguish combustion, and of the safe-lamp. 5. Invisible combustion. 6. Practical inferences."

In the course of this article Sir H. Davy's discovery of the "safety lamp" and the "noble truths first revealed by him concerning the mysterious process of combustion," are made the theme of eloquent and triumphant eulogy. The "practical inferences" conclude with this aphorismal remark: "*Finally, we may establish it as an axiom, that combustion is not the great phenomenon of chymical nature; but an adventitious accidental accessory to chymical combination, or decomposition; that is, to the internal motions of the particles of bodies, tending to arrange them, in a new chymical constitution.*

Congelation and Dew. Many ingenious observations and experiments are enumerated in these articles. With respect to the formation of dew, our author, following Dr. Wells, regards this proposition as established by a "copious induction of facts:"—"*That bodies become colder than the neighbouring air* BEFORE *they are dewed.*" The cold, therefore, which Dr. Wilsoff and Mr. Six conjectured to be the *effect* of dew, now appears to be its *cause*. But what makes the terrestrial surface colder than the atmosphere? The radiation or projection of heat into free space. Now, different bodies project heat with very different degrees of force. In the operation of this principle, therefore, conjoined

with the powers of a concave mirror of cloud, or any other awning, to reflect or throw down again those calorific emanations which would be dissipated in a clear sky, we shall find a solution of the most mysterious phenomena of dew."

Electricity, in its modern augmentation, seems to comprehend almost every change of the corpuscular world, however minute and mysterious, as well as the long recognized and magnificent motions of the atmosphere. Dr. Ure considers the electrical phenomena under a fourfold arrangement. "1. Of the EXCITEMENT of electricity, or the various means by which the electrical equilibrium is distributed. 2. Of the *two electricities*. 3. Of the distribution of electricity. 4. Of the voltaic battery and its EFFECTS; calorific or igniting; and decomposing, or the chymical agencies of electricity." "Concerning the nature of the electrical essence," he adds, "we are equally in the dark as concerning the nature of caloric. The phenomena may be referred in both cases, either to a peculiar fluid whose particles are endowed with innate idio-repulsive powers, or to a peculiar affection of the molecules of common matter."

The memoirs on electricity and galvanism belong to the highest style of scientific description. They are, in all respects, ingenious, curious, and useful. The article on *chymical equivalents* consists of accurate, experimental, and philosophical observations.

Eudiometer. Under this head, Dr. Ure introduces the description of an apparatus for the analysis of gazeous matter by explosion. It was invented by himself about three years ago, and is a simple instrument, "in which the atmospheric air, the most elastic and economical of all springs, is employed to receive and deaden the recoil."

"It consists," says he, "of a glass syphon, having an interior diameter of from 2-10ths to 4-10ths of an inch. Its legs are of nearly equal lengths, each being from six to nine inches long. The open extremity is slightly funnel-shaped; the other is hermetically sealed; and has inserted near it, by the blow-pipe, two platina wires. The outer end of the one wire is incurvated across, so as nearly to touch the edge of the aperture: that of the other is formed into a little hook, to allow a small spherical button to be attached to it, when the electrical spark is to be transmitted. The two legs of the syphon are from one-fourth to one-half inch asunder. The sealed leg is graduated, by introducing successively equal weights of mercury from a measure-glass tube. Seven ounces troy and 66 grains occupy the space of a cubic inch; and 34 1-4 grains represent 1-100th part of that volume. The other leg may be graduated also, though this is not necessary. The instrument is then finished."

The manner of using it is simple and described with much perspicuity; but we cannot afford space for its insertion.

Gas. Dr. Ure arranges his general observations on the gasses into four heads. In the first section is a "general table of gaseous bodies," and under the fourth, a "table of reduction of gaseous volumes, for variations of temperature above or below 60°," both by Dr. Ure's own pen. His division is this:—"1. Tabular views of the densities and combining ratios of the gasses. 2. A description of their general habitudes with solids and fluids. 3. An account of the principal modes of analysing gaseous mixtures. 4. Of gasometry, or the measurement of the density and volume of gasses."

Iodine. From a series of facts experimentally determined, Dr. Ure finds himself warranted in concluding iodine to be *an undecomposed body.*

"In its specific gravity, lustre, and magnitude of its prime equivalent," he assures us, it resembles the metals; but in all its chymical agencies it is analogous to oxygen and chlorine. It is a non-conductor of electricity, and possesses, like these two bodies, the negative electrical energy with regard to metals, inflammable, and alkaline substances; and hence, when combined with these substances in aqueous solutions, and electrized in the voltaic circuit, it separates at the positive surface. But it has a positive energy with respect to chlorine; for, when united to chlorine, in the chloriodic acid, it separates at the negative surface. This likewise corresponds with their relative attractive energy, since chlorine expels iodine from all its combinations. Iodine dissolves in carburet of sulphur, giving, in very minute quantities, a fine amethystine tint to the liquid."

We shall revert to the medical qualities of iodine.

Light, "the agent of vision," constitutes the subject of a very philosophical sketch. "The physical affections of light," says the author, "are foreign to this work. Its chymical relations may be conveniently referred to four heads."

"1. Of the mean refractive and dispensive powers of different bodies. 2. Of the action of the different prismatic colours on chymical matter. 3. Of the polarisation of light. 4. Of the absorption and disengagement of light or phosphorescence." Under the last head, Dr. Brewster's tabular view of mineral phosphorescence is introduced.

Prussine. Dr. Ure objects to its synonima *cyanogen*, the producer of blue. "The same reason," says he, "which tends to the term cyanogen, would warrant us in calling it

leucogen, erythrogen, or chlorogen, for it produces white, red, or green, with other metals, if it produce blue with iron." He prefers the epithet *prussine*, and describes its chymical qualities in a neat analytical sketch. But we must not lose sight of the second part of our arrangement.

II. Medical Chymistry. Connected with this department of science, the Dictionary contains many articles in which are inserted the results of much experimental research. Of these we shall notice a few, chiefly in an abstractive form.

Arsenious Acid. Under this head will be found whatever is known of the nature, action, effects, treatment, and tests of arsenical disease. The medical student will find in it a concise account of the processes by which that substance may be obtained for therapeutical purposes, together with rules for administering its different preparations, and a description of its influences on the living system.

Adipocere. In the description of this substance, and under the articles *Bezoar*, *Gall*, and *Intestinal Concretions*, is enumerated all the knowledge of these singular compositions which modern chymistry affords. Among other ingenious speculations, the following are introduced under the first of these heads.

"In the human colon, solid masses of fat are sometimes met within a diseased state of that canal, and are called *scybala*. A description and analysis by Dr. Ure of a mass of ambergris, extracted in Perthshire from the rectum of a living woman, were published in a London Medical Journal,* in September, 1817. There is a case communicated by Dr. Babington, of fat formed in the intestines of a girl, four and a half years old, and passing off by stool. Mr. Brande found, on the suggestion of Sir. E. Home, that muscle digested in bile, is convertible into fat, at the temperature of about 104°. If the substance, however, pass rapidly into putrefaction, no fat is formed. Fæces voided by a gouty gentleman after six days' constipation, yielded, on infusion in water, a fatty film. This process of forming fat in the lower intestines by means of bile, throws considerable light upon the nourishment derived from clysters, a fact well ascertained, but which could not be explained. It also ac-

* See in the monthly series of the Medico-Chirurgical Journal, Vol. iv. p. 177, "An Account of a Morbid Concretion discharged from the Rectum of the Human Female, and in its Chymical Characters closely resembling Ambergris, with historical Remarks, by James Kennedy, M. D. of Dunning, Perthshire, July, 1817.

counts for the wasting of the body which so invariably attends all complaints of the lower bowels. It accounts, too, for all the varieties in the turns of the colon, which we meet with in so great degree in different animals. This property of the bile explains likewise the formation of fatty concretions in the gall-bladder so commonly met with, and which, from these experiments, appear to be produced by the action of the bile on the mucus secreted in the gall-bladder; and it enables us to understand how want of the gall-bladder in children, from mal-formation, is attended with excessive leanness, notwithstanding a great appetite, and leads to an early death. Fat thus appears to be formed in the intestines, and from thence received into the circulation, and deposited in almost every part of the body. And, as there appears to be no direct channels by which any superabundance of it can be thrown out of the body, whenever its supply exceeds the consumption, its accumulation becomes a disease, and often a very distressing one."

Calculus. Dr. Marcet's arrangement of urinary concretions is here adopted. Their constituent and distinctive principles, the morbid effects they produce, and the best means of counteracting their influences on the health of man, are comprehensively enumerated.

Galvanism. The physiologist will find in this article a detail of the galvanic phenomena exhibited in the University of Glasgow, the 4th of November, 1818, on the body of Clydesdale, the murderer. But as these experiments, which are of no common kind, have been published elsewhere, we shall pass them over.

Iodine has of late been recommended for the cure of bronchocélé, by Dr. Coindet of Geneva, who administered it in doses of three grains a day, with complete success. Dr. Kennedy, of Dunning, has tried it in a case of that disease, and gradually pushed it from 2–4–8–10–12–15 to 18 grains in the day, but without the least advantage. The medicine had been prepared by Dr. Ure, and was of the best quality. Two ounces of it were used in the space of eighty days, during which time the tumour had considerably increased. On two occasions vomiting was induced, but no other inconvenience was experienced, nor was any other remedy employed at any period of the treatment. Into this article of the Dictionary, Dr. Ure has introduced the experiments*

* Those of Dr. Coindet will be found in the "Annals de Chimie," for September 1820; in the "Journal de Pharmacie," for October; and in the "London Medical Repository," for December, of the same year

of M. Orfila, for the purpose of ascertaining the effects of iodine on the assimilative organs of animals.

We shall here introduce the following abridged account of Dr. Coindet's farther experience of iodine, from the Bibliotheque Universelle, for April 1821, as drawn up by the editor of the Medical Intelligencer, in the 20th number of that Journal.

"The introduction of iodine into the materia medica, for the specific purpose of curing bronchocele, is due to Dr. Coindet, a very experienced practitioner of Geneva. In a former memoir published by this gentleman, he expressed a wish, that, by the joint efforts of physicians and chymists, we should one day succeed in procuring a more suitable preparation of this substance than the one now in use,—to which many objections had been urged by some practitioners.

"In the present memoir he expresses his conviction that the hydriodate of potash, used externally, will answer the object required; and in support of his doctrine, he relates some cases in which this preparation of iodine was used topically, with complete success, for the removal of bronchocele and scrofulous swellings.

"Dr. C. directs a pomatum to be prepared for the above perpose, consisting of half a drachm of hydriodate of potash and one ounce and a half of purified hog's lard. Frictions are then made with a quantity of this preparation, of the size of a nutmeg, morning and evening, on the goître and indurated glands, whether scrofulous or situated on the breast. Occasionally, the frictions are to be practised in the course of the lymphatics, and continued till the pomatum is completely absorbed.

"'Une dame agée de 28 ans portoit depuis long-temps un goître volumineux dans le lobe droit, mais bien plus encore dans le lobe gauche du corps thyroide. Il s'étoit considerablement accru il y a trois ans pendant une grossesse. Je jugeai que ce n'étoit qu'une augmentation de volume sans lésion organique. Ce goître altéroit la voix et gênoit la respiration. Après huit jours de frictions les tumeurs étoient sensiblement plus molles, la peau étoit devenue plus épaisse et plus lache; après quinze jours la diminution étoit encore plus considérable; le goître étoit divise en plusieurs petits lobules très-distincts les uns des autres; au bout d'un mois il a entièrement disparu, la voix et la respiration sont redevenues naturelles, sans que la malade ait éprouvé aucun autre effet sensible de l'action de ce remède.'

"Twenty-two other patients, afflicted with the same malady, were treated much in a similar manner; one half of whom have been completely cured, and the remainder considerably relieved. Dr. Coindet observed, on these occasions, that the iodine, thus thrown into the system by absorption, produced exactly the same beneficial results, as when taken internally; and when no organic lesion is present, the disease of the lymphatic system seems to be

acted upon by the iodine, applied externally, with an energy equal to that attributed to the internal remedy.

"In none of the cases in which this application was used, did there appear any untoward effect, such as the iodine, taken internally, is known to have given rise to; though Dr. Coindet thought it necessary to use as much precaution as if he had administered the medicine internally. The author takes this opportunity of remarking, that many local auxiliaries should be resorted to in the case of goître, by which its removal or cure will be greatly accelerated: among these, he reckons leeches and emollient fomentations.

"Dr. C. next tried the hydriodate of potash, as a topical application in scrofulous indurated glands; and the success he obtained was beyond his expectation. He, however, prefers, in such cases, the solution of what he calls the indurated hydrioate of potash, taken internally. The following indications of two successful cases will be read with interest:—

"'Une jeune fille agée de dix-sept ans portoit depuis quinze mois sous l'angle de la machoire et le long du cou des paquets de glandes scrophuleuses, dont une d'elles, la plus basse restoit ulcérée. On avoit inutilement fait un grand nombre de remèdes; je prescrivis une solution d'hydriodate de potasse ioduré dans l'espace de six semaines toutes les glandes se sont dissipées suivant la marche que je viens d'indiquer, excepté celle qui étoit ulcérée. Une fistule pénétrant dans son centre a nécessité un traitement chirurgical pour compléter la guérison. Une autre jeune fille agée de quatorze ans portoit depuis six mois le long du cou un paquet de glandes engorgées; on avoit inutilement fait tous les remèdes généraux et locaux indiqués en pareil cas; dans l'espace d'un mois l'usage de la solution d'hydriodate de potasse ioduré a suffi pour la guérir.'

"In some few instances the medicine, administered both internally and externally, seemed to fail.

"It does certainly appear that iodine is a most powerful agent, and one which possesses a specific and stimulating power over the lymphatic system. As such, it might perhaps be given alternately, or in combination, with mercury. In enlargements of the ovaria, one would think it a useful remedy; but care must be had not to administer it where fever is present, or during the period of excitement.

"For the information of those who may feel disposed to give this remedy a trial, we have deemed it proper to subjoin a formula for the preparation of the hydriodate of potash, with which we have been favoured by Dr. Granville, who begs us to add, that this salt is found ready formed in the kelp for the preparation of soda.

"Make a solution of caustic potash, add a sufficient quantity of iodine, and shake the bottle well: the water is thus decomposed—iodic and hydriodic acid are formed, each of which combines with a proportion of the potash,—the former giving rise to an iodate which is little soluble, and consequently is precipitated,—while the latter forms the hydriodate of which we are in search, and which is highly

soluble. The liquid containing it, is then to be filtered, and the residue washed with alcohol, of the density of 0.82, so as to obtain another portion of the hydriodate—to be added to the former liquid, which may be said to crystallize. The salt is deliquescent, and has a slight yellowish tinge: it consists of 100 of hydriodic acid, and 37.426 of potash.'

"Thenard observes, that by the process of crystallization, as well as by desiccation, the hydriodate of potash is changed into an ioduret of potassium. If so, the salt employed by Coindet must need become a hydriodate during its trituration with the hog's lard —the hydrogen of which it attracts, to form hydriodic acid." *Med. Intel. p.* 368.

Poisons. This is a brief toxicological sketch. Its concluding paragraph contains this information. "Dr. Lyman Spalding, of New-York, announces in a small pamphlet, that for above these fifty years the *scutellaria laterifolia* has proved to be an infallible means for the prevention and cure of the hydrophobia, after the bite of rabid animals. It is better applied as a dry powder than fresh. According to the testimonies of several American physicians this plant afforded perfect relief in above a thousand cases, as well in the human species, as in the brute creation, dogs, swine, and oxen." This assertion is, in fact, totally unfounded.

Magnesia. In the article on this primitive earth are related the remarkable case published by Mr. Brande in the Journal of Science and the Arts, and another "in which not only large quantities of a concretion of a similar description were voided, but upon examination after death, which took place perhaps six months after any magnesia had been taken, a collection, supposed to be from four to six pounds, was found imbedded in the head of the colon, which was of course much distended."

Respiration. Relating to this function of animals, we find the following hint:—"It is probable that the quantity of carbonic acid, produced in the lungs, varies in different animals, and in the same individual in different circumstances. The change of the blood, from the purple venous to the bright red arterial, seems owing to the discharge of the carbon. An ordinary sized man consumes about 46 thousand cubic inches of oxygen *per diem*; equivalent to 125 cubic feet of air. He makes about twenty respirations in a minute; or breathes twice for every seven pulsations" of his arterial vessels.

Vegetable Alkalis. The effects of some of these on the living system may now be noticed. 1. *Morphia*, the narcotic

principle of opium, acts with great energy on the animal economy. A grain and a half taken at three different times nearly proved fatal to a young man aged 17 years. 2. *Strychnia*, the active principle of the strychnos nux vomica, when introduced into the stomach, acts with extreme violence. It produces locked jaw in a very short time, and the animal is speedily destroyed. Half a grain of it in powder, blown into the throat of a rabbit, killed it in five minutes, and brought on the locked jaw in two. 3. *Brucia* is extracted from the bark of the brucea anti-dysenterica: its taste is exceedingly bitter, acrid, and durable in the mouth. Internally exhibited, it operates with a degree of intensity which is to that of strychnia as one to twelve. It excites tetanus, and acts upon the nerves without affecting the brain, or the intellectual faculties.

We shall now close our notice of this work by an extract from the introduction.

"The general reader will find, it is hoped, instruction blended with entertainment, in the articles *aërostation, air, climate, combustion, congelation, dew, electricity, equivalents, galvanism, geology, light, meteorolite, rain, and several other articles.*

"The agriculturist will find details not unworthy of his attention under the heads *absorbent, analysis of soils, carbonate, lime, manure, and soils.* Among the discussions interesting to manufacturers are, *acetic* and other *acids, alcohol, alum, ammonia, beer, bleaching, bread, caloric, coal, coal-gas, distillation, dying, ether, fat, fermentation, glass, ink, iron, ores, potash, pottery, salt, soap, soda, steel, sugar, and tanning.* Belonging to mineralogy, are the subjects *blowpipe, geology,* with its subordinate *rocks, ores, and meteorolite.*"

By the specimens which we have now placed under the observation of our readers, they will be prepared to estimate the merits of this scientific Dictionary. We may be allowed, in conclusion, to state the impression it has left on our own minds. The work, then, in our opinion is unrivalled; theory, in general, has been rejected from its pages; its doctrines and practical views are based on the results of experimental induction; and its style is, in a particular manner, significant, perspicuous, elegant. We, therefore, do cherish an agreeable anticipation of the excellence of Dr. Ure's forth-coming system of chymical philosophy.

VI.

Transactions of the Association of Fellows and Licentiates of the King's and Queen's College of Physicians in Ireland. Vol. III. pp. 520. Dublin and London, 1820.

Our brethren, in Dublin, have lately produced the most authentic proofs of the zeal and talent with which medicine, in its comprehensive sense, is cultivated in the sister isle. Their writings have established the reputation of individuals, enhanced the fame of the Irish university, and enriched the archives of science. Acting upon equal talent, the discipline of the Dublin school of medicine must very soon produce effects which will be felt throughout the United Kingdom, and render the Irish academic qualification a badge of honour inferior to *none*—superior to most. Let other universities look to this. Talent is not hereditary—fame cannot be transmitted from father to son; nor can it be conferred by a cabal, or retained in name when lost in substance. We are arrived at that period, when intellectual, is nearly as ardent in operation, as mechanical competition. And as native capacity is equal, or nearly so, in great masses of society, so the institutions which give fullest scope to talent, impose least restraint on labour, and offer the surest reward for merit, must as regularly rise pre-eminent among others, as it is certain that plodding industry shall outstrip indolence, or genius dulness. Self-evident as these positions are in theory, and verified as they have often been by experience, they are *not* always put in practice. A spell seems sometimes to hang over a public body, as well as over a private individual, urging each to act contrary to the dictates of sober judgment.

> ————Video melioraque probo,
> Deteriora sequor.

Art. I. *Pathology and Treatment of Fever, founded principally on Observations, &c. By Robert Reid, M. D.*

We have dedicated so much space, in this Journal, to a delineation of writings on fever, that we must now be on our guard against extending this department beyond its proper bounds. At the same time we are unwilling to pass over any respectable monograph on this interesting subject, without giving the author that advantage which results from an extensive circulation of his more prominent doctrines and observations. Our circumscribed limits will therefore compel us to notice *only* the more striking traits of the paper now before us.

Dr. Reid, like the other Irish physicians who had ample experience, corroborates the fact of the late epidemic being decidedly contagious. Among the anomalies which it presented, were several cases of eruptive diseases, many of them so exactly resembling small-pox, that their identity would have been pronounced by any practitioner, if seen *only* at the period of maturation. In general, these patients did well, and required little or no medicine.* In some *few instances*, the eruption took on the appearance of pemphigus gangrenosus, and *these* cases proved mortal. In many instances, swellings in the neighbourhood of glands came on, and when to one of these were applied cold lotions, the febrile symptoms were exasperated in proportion as the heat, pain, and size of the tumour were lessened. This, of course, led to a change of treatment: leeches were applied instead of cold, "which soon effected some alleviation of the general symptoms." These tumours did not seem to be connected with any peculiar malignity in the disease.

Upon the *nature* of fever, that piece of knowledge "which still so near us, yet beyond us lies," our author has entered pretty fully, and in those inferences which appear deducible from the symptoms during life, and the examinations after death, we agree very generally with Dr. Reid. But he goes a little farther into hypothesis than we can follow him, and then we consequently wish each other good bye. Considering the variety of type and character which fever assumes, under different circumstances, our author is led to view it, "as the result of a general cause, (he might have said a *variety of causes*,) which may be directed by accidental circumstances against some particular apparatus or function of the human frame."

"By considering fever to be strictly '*sine morbo locali primario*,' the endless disputes which have hitherto prevailed relative to the seat of fever, may, in some measure, be reconciled. An accurate investigation of the circumstances of the patient previous to the developement of fever and all the subsequent phenomena of the disease, tend to show some cause acting directly on the nerves, destroying their influence throughout the animal frame. The extreme vessels in the various organs are thus rendered incapable of resisting the force of the heart and arteries. This gives rise to congestion very different from active inflammation, the place of which is determined by the accidental debility of the part, or previous constitution of the patient." 19.

* We were somewhat surprised to see the editor of the Medical Intelligencer, No. 18, make the whole of these cases terminate fatally.

Dr. R. divides the nervous apparatus into three great branches or systems, the cerebral, spinal, and ganglionic, balancing each other, and, by their reciprocal influence, regulating the various functions. Although the causes of fever may fall on one, more than on another of these systems; yet when it is considered that not a single point exists in the animal frame that is not under the reciprocal influence of each and all of those nervous systems, we may easily conceive how difficult it must be to attach the symptoms of disease to their proper class. This is only to be done by long and patient observation at the bed side, assisted by dissection.

Our author believes that, upon an attentive contemplation of the phenomena of fever, four remarkable changes will be observed in the course of the disease.

"The first is, the immediate effect of the cause of fever, whether externally applied, or generated within the body of the individual. This may continue for an hour, for some days—nay, even some weeks! To this succeeds primary reaction, indicated sometimes by acuteness of the intellectual faculties and external senses, not unfrequently amounting to pain. Restlessness soon follows, which often induces the patient to exert himself considerably beyond what his strength is capable of supporting. The presence of this stage becomes principally conspicuous in the functions of the sanguiferous apparatus; the pulse feels laboured, with a sensation of throbbing, often very distressing in the head; the whole external surface appears distended, accompanied with considerable increase of heat. At this time also, there is frequently a troublesome cough, generally without expectoration.

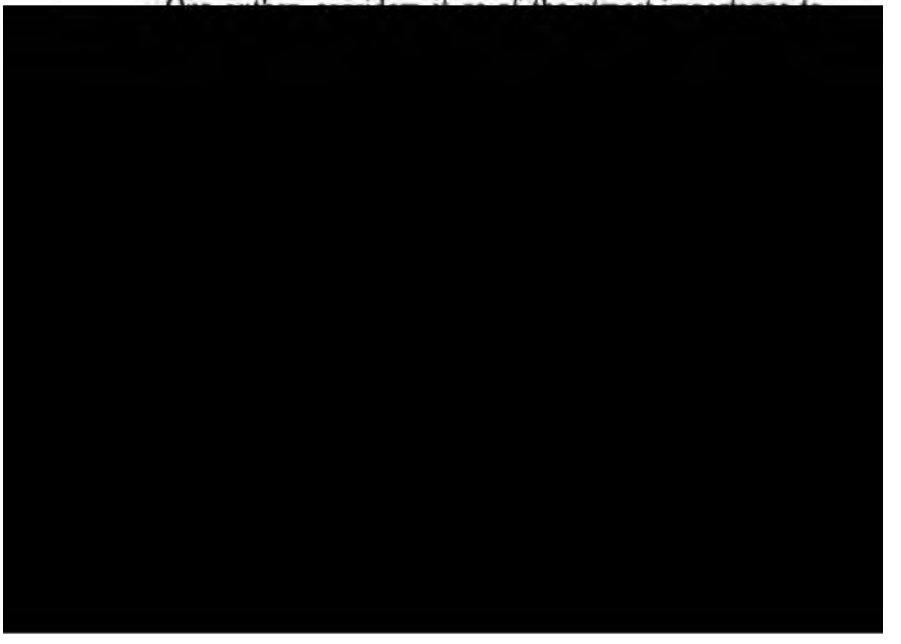
"Should the vital powers of the constitution at this period rally, a disposition to active inflammation arises: this quickly attacks some organ or apparatus, and thus changes the character of the disease. Hither the whole force of the morbid actions are (is) directed, and all the symptoms arise which are peculiar to acute inflammation of the affected part.

"But it more frequently occurs, particularly among the inhabitants of large cities or manufacturing towns, that the general vital powers of the nervous centres still remain oppressed. Under such circumstances, when this stage has continued for a period long or short, according to the constitution of the individual or mode of treatment that has been adopted, some weak part gives way and local congestion takes place. Before this occurs there generally appears an exacerbation of all the symptoms; this, however, quickly subsides. The skin becomes relaxed, and often profuse perspiration bursts forth; the patient feels wearied, languid, and inclined to sleep; the pulse becomes feeble, sometimes quicker, but more regular, the natural evacuations take place, and thus a crisis may be observed." 27.

But death often takes place instead of this crisis, and then dissection generally discloses local congestion, but not inflammation, unless the constitution should unexpectedly rally, soon after which, pains begin to fly about—thirst increases—the tongue becomes brown and furred—the alvine evacuations are suppressed, or discharged dark and fetid—the abdomen becomes distended—delirium—coma—convulsions, or absolute exhaustion closes the fourth stage. Here dissection discovers "the most extensive appearances of inflammatory action." Purulent or sanious matter is sometimes found in the spinal cavity, but most generally congestion—in other viscera and cavities, those marks of inflammation which are peculiar to their structures.

After many ingenious observations on the physiology of the cerebral system in health, which we must necessarily pass over, Dr. Reid proceeds to the deviations distinguishable during the existence of fever. A striking one is the altered expression of countenance, which is often observable long before the patient is aware of the impending disease. The appetite fails—the intellectual powers become confused—there is morbid sensibility, or an opposite state, over the surface of the body, &c. &c. &c. But we cannot follow our author through a long train of phenomena which are sufficiently familiar to the practitioner.

Dr. R. truly remarks, that it not unfrequently happens that traces of inflammation cannot be detected in the brain, *post mortem*, though the indications of its existence were unequivocal during life.



attempts to swallow liquids. From the observations I have had an opportunity of making, I am led to think, that patients whose constitutions had been injured by repeated attacks of intermittents, were most liable to this affection in continued fever." 41.

On the influence of the spinal system over the voluntary and involuntary muscles, thoracic and abdominal organs—on the state of the pulse—on petechiæ—on the temperature in fever, Dr. Reid makes many interesting observations, which our limits prevent being noticed; but before we speak of therapeutics, we shall make room for one more pathological extract, containing some curious matter.

"During the epidemic, which is the immediate subject of these pages, the liver seemed to be that organ of the ganglionic system which attracted the most constant attention of the physician. The actions of this viscus appeared to be modified according as the disease was severe upon the other systems. When the cerebral system was principally affected during the disease, the liver was found after death contracted and firm in its structure; the gall-bladder contained but little fluid; this was sometimes a dark coloured pitchy substance, and did not communicate the yellow stain to the neighbouring parts after death, which is usually observed when the gall bladder is filled with the proper biliary secretion. In these cases the blood did not appear deficient in quantity, and when drawn during life, had a tendency to become rapidly coagulated.

"When the spinal system was much affected, there was observed an excessive formation of biliary secretion, while the quantity of red blood appeared to be remarkably diminished. In such cases I have found in the gall bladder a number of small spicular stones, in appearance perfectly black: on minute examination, however, these were found to consist entirely of inspissated bile, about a grain of which was capable of giving a fine yellow colour to three quarts of water. The fluid in the gall bladder was thick, and nearly resembled black oil paint; but on being diluted with a large quantity of water, the whole became of a beautiful yellow colour. It may be extremely important for the practitioner to notice this circumstance, as in such cases the fæces may become apparently of the natural colour, although the biliary apparatus may not be in the slightest degree unloaded. The two first cases which occurred to me of this kind happened in the summer; both proved fatal. On examination after death, the liver seemed gorged with bile, and stellated; the sanguiferous vessels contained a considerable portion of biliary matter; the quantity of blood contained in the vessels throughout the body was so small and so changed in its sensible qualities, as to appear scarcely capable of performing any useful function in the animal economy; an attempt was made to take blood from the arms of both these patients, but without success. Such modification in the action of the liver indicates defective influence of the spinal system over that viscus. This

seems well to coincide with the fact, that in comparative anatomy as we descend in the scale of animated beings, it is found that the formation of red blood ceases to occur when the animals cease to be endowed with a vertebral column or spinal system." 60.

During the late epidemic, it was remarked that, in the remote parts of Ireland, where the poor were nearly destitute of medical assistance, and had little other sustenance than water, "the disease was seldom fatal." In cities, and among the upper classes, the fever was much more fatal, with all the assistance of medical art. This does not militate against the means used; but it proves that, in the *latter* classes of society, the constitution was less suited to bear the febrile movements with impunity, than in the *former* class. We have no doubt, that if the upper classes were left destitute of medical means, (we mean judicious means,) the ratio of mortality would be greater. When any organ in them becomes inflamed or congested, Nature is not so equal to its preservation as in the lower classes, where less excitement is habitually applied to the system in general.

It is rare, of course, for the physician to be consulted in the very earliest movements of fever, or rather when its causes are operating in bringing forth the ostensible form of the disease. At such a period our author thinks that by serenity of mind, change of scene, and regulation of the bowels, the attack might be entirely repelled. When fever is actually developed, "absolute rest should be enjoined." In the first stage, the timely administration of an emetic often rouses the torpid energies of the frame, and recalls the organs to energetic action, besides unloading the stomach of irritating sordes. "Should bleeding be resorted to in the period of collapse, a protracted disease must be inevitable."

"In fever, the first time that blood-letting from the general circulation can be used without doing mischief, is just previously to the second stage, when the pulse recovers energy, and there are symptoms of general reaction. Troublesome cough without expectoration, is at this time often observed, generally attended with sharp pain about the chest. By taking twelve or fourteen ounces of blood from the arm, the patient will feel almost immediately relieved, and by supplying him with diluents which promote a gentle diaphoresis, at the same time regulating the operations of the alimentary canal, all the symptoms are mitigated, and the disease quietly proceeds to a termination without advancing to the congestive, or third stage." 65.

The third stage, in which local congestions in one or more viscera are prone to occur, is that which tries most the sagacity and resolution of the medical attendants. Congestion existing, but anterior to secondary reaction, general

bleeding, Dr. R. thinks, is highly improper; local bleeding, however, is of the greatest advantage. In cerebal congestions, Dr. R. recommends the usual means; but considers blisters as highly prejudicial. "If the disease be severe, blisters to the head will not rise; when this happens they inevitably augment the morbid state they were intended to relieve, and very often induce a fatal apoplexy." When the force of the fever was exclusively directed against the cerebral system, a papular eruption on the back, breast, and loins, generally proved favourable. Where the spinal system was much oppressed, with torpor of the cerebal system, blisters were highly advantageous. Petechiæ our author looks upon as symptomatic of spinal debility; and as he considers the pelvic viscera to hold the most intimate connexion with the ganglionic, so he accounts for the utility of turpentine in such cases. He has seen patients, whose powers of life were so exhausted by disease, that deglutition was impracticable, gradually recalled to energy by purgative enemata with spirits of turpentine. In the treatment of the third stage of the disease, when the ganglionic system was chiefly affected, our author makes the following observations:—

"Soon, however, as pain in any part arises, or that it is excited by pressure, the stage of secondary reaction is to be expected: local bleeding by means of leeches now proves highly efficacious. I have had reason to imagine that the effect of leeches was more powerful than could be accounted for by the quantity of blood alone which they drew from the patient: this has been observed by Dr. Armstrong, and I have no reason to differ from his opinion. There are cases of this secondary reaction, where the process of sanguification appears to be arrested, and no blood can be obtained by opening a vein in the arm: even some cases which proved fatal, upon examination after death did not afford three ounces of proper red blood in the entire frame; yet these patients derived considerable relief during life from the application of leeches to the region of the liver. The internal medicines which appeared most efficacious in such cases, were calomel and opium combined, or a solution of tartarized antimony largely diluted. In the cases which terminated fatally while under the influence of these medicines, the internal surface of the stomach and alimentary canal exhibited a tissue of minute red vessels. It was extraordinary that this appearance extended from the stomach downwards in proportion to the length of time that the patient had been previously using these remedies. It may not be improbable that the French writers of the present day, who suppose that fever is seated in the mucous membrane of the alimentary canal, have been deceived by the appearance of vascular determination, which the remedies they employed during the disease induced upon the internal surface of that canal." 32.

Here our analysis must close. The remainder of the paper is occupied with an investigation of the means of arresting the progress of contagious fever, when epidemic in a country; and for this investigation we must refer to the volume itself. We have adduced enough to show that Dr. Reid is no common observer, and that about him there is no lack of either zeal or talent. We are not quite certain that the ingenious author, like all other ingenious writers, has not a little bias or bend towards a favourite theory. We will not pretend to determine whether the bend be sinister or dexter, in his medical escutcheon—or whether it may not incline a little *spinally;* but we may avow our belief, that it has not had any influence in causing him to deviate from the sober path of sound judgment in the paramount object of all investigations —the successful treatment of disease.

ART. II. *Case of Hæmorrhage, supposed to be from the Spleen.* By W. HARRISON, M.D.

As this case does not appear to us to involve any particular practical question, we shall be very concise in our notice of it. A sergeant of dragoons, accustomed to hard riding, had been dragged off his seat; fell with violence to the ground; and received a hurt in the region of the spleen, after which, for ten or twelve days, he had felt pain and soreness, with a sense of scalding, at the scrobiculus cordis. At the expiration of this period, he was seized with a discharge of blood, to a great amount, upwards and downwards. When seen by Dr. H. the pulse was scarcely perceptible—face and lips exsanguious—voice sunk—articulation unintelligible. He rallied a little from this state; but next day had a return of the hæmorrhage. On the third day, febrile symptoms set in, with pain and tenderness in the splenic region, and tension of the abdomen. Blood was abstracted from the arm, *ad deliquium animi;* and from that time he gradually convalesced.

We do not think there is any thing in the case to found more than a mere conjecture on, that the hæmorrhage proceeded from the spleen. We have seen such vast quantities of blood issue, in a short time, from the mucous membrane of the primæ viæ, in severe dysenteric affections, that we can find no difficulty in believing the hæmorrhage, in the present case, to have emanated from that source.

ART. III. *Cases of Eruptive Diseases.* By DR. ROBINSON.

These cases are four; two of variolous and two of varioloid eruption. The *latter* were post vaccinam. The distinctions between the *two species* were so remarkable, that the latter, he thinks, may be considered a *new*, or mild species of the disease. These, with similar facts furnished by Dr. Hennen and others, lead to the following conclusions:—

"1. That an eruptive disease is produced by the contagion of small-pox on the persons of *some*, who had undergone the vaccine inoculation.

"2. That this eruption has, in a certain degree, the form, and effects the course and changes of variola, although of *shorter duration*, but is not *dangerous* to human life, and may be considered a *new** and mild species of that disease.

"3. That vaccination, as far as our experience has yet gone, appears fully capable of preventing the *fatal effects* of small-pox, and of ultimately banishing that formidable and loathsome disease from among mankind." 111.

Dr. Robinson inoculated thirty children belonging to the same school, (eighteen of whom had been vaccinated several years previously, the rest had had small-pox,) with variolous matter. The result was the same in all—no eruptive disease was produced, nor affection, local or constitutional. "This experiment, he observes, is decisive in favour of vaccination."

ART. IV. *A case of Emphysema, without external violence.* By RICHARD STANLEY IRELAND, M. D.

Cases of this kind are comparatively rare. A child, nine years of age, was attacked with pneumonia, the violent inflammatory symptoms appearing to give way to the usual remedies, but a troublesome and distressing cough remaining, after a severe fit of which, a colourless swelling was observed above the clavicles. This swelling rapidly increased, extending up one side of the neck to the face, immediately after which, the entire scalp became emphysematous, rendered unequivocal by crepitation. The respiration now became more difficult, and the cough doubly distressing—the pulse quicker, smaller, indistinct, and irregular—the face pale, and ultimately livid, with cold perspirations over the

* Doctor Clarke calls it, a *Hybrid*.

body. The little patient was bled largely by leeches every day, with temporary benefit. Scarifications would not be permitted, and the child died on the fifth day. Examination of the body was not allowed.

Dr. Ireland conceives that the emphysema was produced by the rupture of an air vessel in the lungs, from the violent exertion of coughing; and that the air became diffused through the cellular substance connecting the lobules, insinuating itself upwards between the pleura pulmonalis and lungs, at the root of which it escaped, occupying the space between the two layers of the mediastinum, whence it appeared above the clavicles, and soon extended to the parts beforementioned. Dr. Ireland remarks that he never before saw a case of this kind, nor does he recollect to have read of any. If he or the reader will turn to the 12th volume of the DICTIONNAIRE DES SCIENCES MEDICALES, page 6, *et seq.* he will find many curious cases and particulars illustrative of this subject. The following case, lately attended by the celebrated Dubois of Paris, is exactly in point.

"A child, thirty-two months old, was seized, in the beginning of July, 1812, with violent convulsive cough, the paroxysms being of frequent recurrence. On the morning of the fifth day, a few moments after a violent paroxysm, emphysema appeared at the upper part of the sternum, whence it quickly extended under the mastoideus muscle to the face—to the arm pit—and all the upper parts of the chest. In the evening of the same day, the emphysema was found to occupy the neck, the abdominal parietes, and the scrotum. The following day the upper and lower extremities were emphysematous, and the difficulty of breathing increased with the progress of the emphysema. Suffocation became imminent, and tracheotomy was impracticable, from the great swelling of the neck; besides, such an operation appeared useless, as the ruptured vesicle was at a great distance below. Dubois therefore only recommended anodyne and pectoral drinks to assuage the cough, and the whole body to be enveloped in compresses soaked in aromatic wine. Under this treatment the respiration became gradually more free, and in the space of eight days, the emphysema totally disappeared." *Op. Cit. p.* 8.

Bromfield, Benjamin Bell, and some other authors, have stated that these accidents result occasionally from violent fits of coughing, crying, or even immoderate laughter—also in consequence of obstruction in the trachea. Hoffman relates a case of rupture of an air-cell and suffocation as the termination. Meckel (Memoirs of the Royal Academy of Berlin, vol. vii. p. 16.) states a case of emphysema, where, in consequence of an obstruction of mucus in the trachea, air

burst into the cavity of the pleura of the right side, and suffocated the patient.

The fifth article in the volume before us, is on affections of the cranial brain, by Dr. Nicholl, which forms the basis of a small volume that will be found reviewed in another part of our Journal. We shall take up this third volume of transactions in our next number, and hope to finish the analysis of it in that article.

VII.

Memoria sopra il Metodo, &c. Memorial on the Method of extracting the Stone from the Urinary Bladder by the Rectum.. By Andrew Vacca Berlinghieri, Prof. of Clinical Surgery in the University of Pisa, &c.

We were the first, we believe, to call the attention of our countrymen to the new method of performing the operation of lithotomy, originally proposed by Mr. Sanson, a French surgeon, in our observations on a case where that method was adopted by Prof. Barbantini of Lucca.* On perusing Prof. B.'s account of the *recto-vesical* operation, by which our attention was first called to the subject, we were forcibly impressed with the advantages which it appeared to us to possess over both the *lateral* and *high* operations; and in our notice of Prof. B.'s memorial, we ventured to express our opinion, and to recommend in strong terms the consideration of the subject to English surgeons. What impression our sentiments, on the recital of the case alluded to, made on the minds of our readers, we know not; but we now feel much satisfaction in being able to show that we were not singular in our opinions, since they seem to coincide with those formed and acted upon by one of the most celebrated Italian surgeons of the present day, Professor Vacca of Pisa, of whose interesting Memorial, published a few months ago, we shall now proceed to give as clear and succinct an analysis as we can.

Professor Vacca is already too well known to the medical world to require any encomiums from us;—his present Memorial, we believe, will not detract from his fame. He begins by disclaiming all credit in the invention of the

* See our Journal for April, 1820, No. 8, p. 631.

recto-vesical operation, and gives the whole merit of the discovery to Mr. Sanson; showing by a quotation from Vigetius, who was a veterinary surgeon, that he speaks only of extracting urinary calculi, by the rectum, from brutes, when the bladder has been accidentally ruptured: he anticipates, however, a greater degree of success than the original proposer had, in calling the attention of surgeons to the *Sansonian operation*, from his being able to support it by more numerous and satisfactory cases.

"I think," he says, "I can show by not a few observations what simple reasoning induced Mr. Sanson to believe, that the *recto-vesical* operation for the stone deserves by every title a preference to all others, not indeed as recommended by Mr. Sanson, or as performed by Mr. Dupuytren, and several Italian surgeons, but by a different method which Mr. Sanson, however, described as possible."

Our author next takes a view of the different methods that have been adopted for extracting calculi from the bladder, and of the advantages and disadvantages attending each; through the whole of this we need not follow him, but shall merely notice his opinion of the only two methods that are likely to be put in competition with that under consideration —the *high* and *lateral* operations. Of the first of these Prof. V. at one time thought very highly and frequently practised it, but more extensive experience has induced him to change his opinion. The great danger of peritoneal inflammation and of the extravasation of the urine, independent of the difficulty which often arises in the performance of this operation from the thickness and contractions of the

a laborious, long, and painful process—presenting difficulties which have been felt by all the ablest lithotomists, as the works of those who know alike how to publish their successful and unsuccessful operations sufficiently attest;" p. 25; and we may add, as all who have seen but a few operations for lithotomy performed must be fully impressed with—who have witnessed the sufferings of the unfortunate patient, tortured under the attempts of the surgeon to extract a stone too large to pass, except by bruising and lacerating the parts through which it is dragged, or the tedious and painful grapling and digging to extract its broken fragments. Surely if there is a shocking operation in surgery it is this; and most sincerely do we congratulate surgeons on the prospect of their being exempted from the performance of so painful a task, and mankind in general from such dreadful sufferings.

Of the superiority of the new method we shall let our author speak for himself.

"The recto-vesical operation," he observes, "seems to unite all the principal advantages and to present the fewest inconveniences. I need not call to the minds of my readers their knowledge of minute anatomy to persuade them that there is no point of the perineum nearer to the bladder than that which is immediately anterior to the sphincter ani. There is not much ingenuity required to perceive, that by cutting in this point the sphincter, the parietes of the rectum, the membranous part of the urethra, and the prostate, by an incision, which divides but few soft parts, we shall have procured an opening sufficiently large for the entrance of our fingers, our forceps, and the egress of the stone; because we take advantage of the natural aperture of the anus and of the cavity of the rectum. The most general notions of anatomy suffice to convince us that an incision which divides the anterior part of the sphincter ani, the membranous part of the uretbra, in the middle line of its anterior (INFERIOR) parietes, the neck of the bladder, the prostate and fundus of the bladder in the same line, does not approach any large vessel or other part important to life. It is clear also that by this method the stone will pass between the rami of the ischium when they are very far separated, and when they in consequence have an ample space for the passage of the largest stones. It is also evident, that the direction and shortness of the wound render impossible any extravasation of urine; render the wound [illegible] less extensive, and the exit of any fragments of stone that may remain in the bladder more easy.

"The depth of the wound being less than by the other methods, the surgeon is enabled to penetrate farther into the bladder with his finger to ascertain the form, size, and situation of the stone previous to his grasping it for extraction.

"By the *recto-vesical* operation, then, we avoid the danger of

wounding the large vessels of the perineum: and, as in the high operation, we are enabled to extract the largest stones, without the inconvenience of laying bare the peritoneum, and of exposing the surgeon to the risk of wounding it, or of the danger of extravasation of urine." P. 25. &c.

The objections that may be stated to the *recto-vesical* operation are chiefly two—its wounding the rectum, and secondly, its establishing a communication between the rectum and bladder, and admitting the contents of one cavity into the other, by which a stercoraceous fistula may be formed. To the first objection in the present state of our knowledge of the structure of the rectum, an answer is scarcely required. The second appears a much more weighty objection: our author answers it however satisfactorily.

"This inconvenience is not a necessary consequent on the extraction of the stone by the rectum, but of the *peculiar method* to which Mr. Samson seems to give the preference, and which Mr. Thompson and other surgeons have adopted. It may easily be avoided by dividing the prostate and neck of the bladder only. By this process the incision of the intestine is at least as much lower than that of the neck of the bladder;—the parietes also of the neck of the bladder remain in contact, being separated only during the passage of urine; by this method also the parietes of the intestine perform the office of a valve, which prevents the passage of the faeces into the bladder." P. 32.

In support of this the Professor refers to his cases.

The description of Mr. Weiss's method of operating is rather obscure, which ought to be avoided. The instruments required are a common grooved staff, a common straight bistoury, and a pair of forceps, and in some cases, a very narrow straight bistoury, with a button terminating in a small button. The patient is placed and secured in the same way as for the common lateral operation. The staff is first introduced and given to an assistant who takes care to keep it firm, the handle perpendicular to the pubis, neither inclining it to one side or other, but so that the groove part shall correspond to the middle line of the urethra or raphe. The flat edge of the bistoury being closely applied along the palmar aspect of the index finger of the left hand, to avoid the intestine being wounded during the introduction, they are to be carefully introduced into the rectum, the back of the finger being directed towards the sacrum, its palmar aspect, upon which is applied the bistoury, towards the symphysis pubis. In this way they are to be carried into the intestines to the distance of ten or twelve lines; the finger is then to be pressed backwards towards the sacrum, so as to admit of the cutting edge of the bistoury being turned towards an-

terior part of rectum, its back now resting on the finger; taking care that the cutting edge of the bistoury points directly to the raphe of the perineum; the index finger, upon which it rests, is now to press the bistoury forwards, so that it shall divide the anterior part of the intestine; with the right-hand the bistoury is then to be withdrawn, so as to continue the incision, then begun in the rectum, through the cellular substance between it and the urethra, the external sphincter of the anus and beyond it, not more than eight or nine lines, in the perineum. The first incision being thus finished, the index finger of the left-hand is to be introduced into the wound, immediately beyond the divided sphincter, and the groove of the staff sought for with the nail, (which it is said should always be long when the surgeon performs this operation)—this being felt through the parietes of the urethra, the same bistoury is to be introduced guided by the nail of the finger, so as to divide the urethra, the nail and point of the bistoury being now in the groove of the staff, still retained firmly in its original situation, the bistoury is to be pushed forward along the groove into the bladder, so as to divide the prostate and neck of that viscus to a greater or less extent, according to the operator's idea of the size and form of the stone. As we are very apt however to err on this subject, the Professor thinks it will be better to make rather a small wound of the neck of the bladder and prostate, as, if necessary, it may be easily enlarged by the straight bistoury, having the small button at its extremity. We need not follow our author through the remaining part of the operation, which is the same in this as in the lateral. With regard to the dressing of the wound, Prof. V. enters a strong protest against introducing any substance whatever between the edges; an unnecessary piece of advice this, we believe, for English surgeons. Frequent washing, so as to maintain the parts perfectly clean, is all that is required. To allay the pain, opium given in small or large doses, according to circumstances, diluting mucilaginous drinks, the application of leeches about the anus, and in the robust even copious general bleeding, with the strictest diet, till all danger of inflammation is over, are the means used by the Professor.

The danger of inflammation being over, and suppuration established, our author thinks it necessary to begin to touch that part of the wound which corresponds to the incision of the rectum, and that portion which remains in the perineum, with lunar caustic. This practice is said to accelerate the cicatrization in a wonderful manner, and in the only one of his patients where the wound was not speedily

cured, he attributes the circumstance to the neglect of this practice by his assistant, he himself being obliged to leave the hospital for some time. Professor Vacca thinks the *vagino-vesical* operation equally applicable to women as the *recto vesical* to men; though, in the former, the fundus of the bladder should be cut, and the neck of that viscus and urethra avoided. One case of stone in a woman has alone presented itself to our author, since he became acquainted with the new method; urgent symptoms compelled him to operate, but her pregnancy rendered it, in his opinion, imprudent to do it by the vagina.

We now come to Professor Vacca's cases, which are reported by his pupils, and as we consider them very interesting, we shall give a short notice of each.

The *first* is a patient of 70 years of age, much emaciated. Having endeavoured to allay the irritation which this poor man suffered from the stone and a stricture of the urethra, the operation was performed on the 7th of February, 1820, a purgative of cream of tartar having been administered the day before, (a practice which is followed in the school of Pisa before all great operations,) and the rectum cleared by an injection the morning of the operation. The operation was executed with ease. The extraction of the stone, however, presented great difficulties; it was of a large cylindrical form, the extremities pointing to the ischia; from this position it was found impossible to move it; it was therefore broken and extracted in three pieces; the stone was rough, and to one of the fragments adhered some soft membranous filaments. This last circumstance induced the Professor to think that the stone had been adherent to the bladder. Tepid water was injected into the bladder to remove any fragments that might remain. The operation thus finished, the patient was laid in bed, and as he had lost very little blood, and suffered much, eight leeches were immediately applied to the perineum, and four over the pubis.—Twenty drops of laudanum were given—fomentations ordered to be applied to the hypogastrium, and the patient kept on the lowest diet, having abundance of diluent drinks. In the evening the irritation was calmed, but a slight fever had appeared; urine mostly by wound, a small quantity only by natural passage. Next day pain and tension of hypogastrium with increase of fever. Day following symptoms still increased; more leeches applied. Towards evening of this third day after operation he died. On examination, peritoneum was found inflamed, coats of bladder much thickened, and a puriform fluid effused between muscular coat and peritoneal, also into cellular membrane between

bladder and pubis. Internal membrane of the bladder appeared gangrenous, and some fragments of the stone were found attached where probably the stone had adhered. The liver much enlarged.

Second case was a healthy country boy of five years old—operated on May 4th, 1820—whole operation performed with ease—six leeches applied round anus immediately after—towards evening slight fever with uneasiness of hypogastrium to which four more leeches were applied. On fourth day after operation a few drops of urine passed by urethra, but it was not till the eleventh that it came regularly in small quantity by urethra, and continued to augment; on the 20th June this boy was discharged with a small fistula in perineo, from which a few drops of urine escaped every time he passed his urine. This, as we have already noticed, Prof. V. attributed to the application of the caustic being neglected. The boy after some time was taken back to the clinical wards, and when Prof. V.'s observations were published, a small fistula still remained.

Third case was a countryman, aged 38 years, of a cachectic habit, who had suffered for two years, about which time the calculus seemed to have passed from the pelvis of the kidney into the bladder. This patient had his symptoms much increased by a rough journey of fifty miles; a few days after his arrival in clinical ward, he was attacked by a dysenteric affection. This affection having abated after some time, though there still remained some fever, urine charged with blood and mucus and the alvine evacuations continuing about seven a day, the operation was resolved on, from the urgent entreaties of the patient, and the hope that the dysenteric symptoms, &c. might be symptomatic of the presence of the calculus in the bladder. The incision and extraction of the stone, which was rough and of the size of the largest pigeon's egg, were performed with facility. Twenty drops of laudanum were given. Day after operation fever was less than day before it was performed, the alvine evacuations were fewer, urine almost entirely by wound, a few drops only by penis. Second day free from fever, though towards evening it returned with tension and pain of hypogastrium; eight leeches and fomentations were applied to this region, though patient was very weak—alvine evacuations much diminished; urine, partly from wound, partly by natural passage, less charged with blood and mucus. From this time patient went on well, urine passing entirely by wound till eighth day, when a few drops began again to pass by urethra, and the quantity continuing to augment daily; on the fifteenth the whole urine flowed by

the natural passage when patient was in horizontal posture, though a few drops passed by wound in the erect posture. Sixteenth day, slight œdema of face and lower extremities appeared without any evident cause. Eighteenth, urine came entirely by natural passage in erect posture. Twenty-fifth day from operation wound almost cicatrized, though slight degree of œdema still remained. August 30th, discharged cured from hospital, thirty days after operation. From fifth day after operation, whole extent of incision touched with caustic.

Fourth case occurred in a healthy countryman, aged 74 years, whose age seemed the only objection to operation. The preparatory ounce of cream of tartar being administered, as usual, on preceding day, this patient was also submitted to operation on 1st August, 1820, after the exhibition of an enema. Nearly fifty calculi, varying from the size of a pea, to that of a small nut, were extracted in this case, and with these a small pediculated cyst containing a limpid fluid. Immediately after operation twenty drops of laudanum were given, and eight leeches applied to perineum; the lowest diet and copious dilution enjoined. Towards evening, fever with some tension of belly appearing, eight ounces of blood were taken from arm, and emollient fomentations applied. Next morning he was free from fever, which however returned with chills about eleven o'clock; and in the evening eight ounces more blood were taken from arm. The fever continuing to recur daily, without any pain or tension of abdomen, was suspected to be of the intermitting kind, and bark was administered, which speedily stopped it. On the

The *sixth* and last case was a child two years old. The operation was performed with ease. A few drops of blood only were lost. Urine from first flowed in part from urethra. On 9th day after operation not a drop passed by wound. October 28th, discharged cured from hospital. Operation was performed October 14th.

Such are the cases operated on by himself, which Prof. Vacca brings forward in support of his opinion of the *recto-vesical* operation, and which cannot fail to have very considerable weight, we imagine, in calling the serious attention of surgeons to the subject. In the perusal of these cases we remarked with pleasure the great attention which Prof. V. seems to pay to his patients after his operations, differing in this respect from some operators who seem to think the operation the only thing deserving of their attention—conduct which cannot be too severely reprobated, and of which, if we mistake not, it has been our misfortune to witness more than once the fatal effects—when after a fairly performed operation, the patient has been lost from inattention to the supervening symptoms.

To his own cases Prof. V. adds a brief account of five others, which have been performed in Italy, one by Dr. Farnese, a surgeon in Milan. Patient, in this case, was a healthy man of 50 years. The urethra, neck of bladder, and prostate, were divided; not the fundus of the bladder. The symptoms were mild—no feculent matter passed off with the urine, which, after 10th or 12th day, passed entirely by natural passage;—the wound was frequently touched by caustic, and in 35 days was quite cured. Dr. F. is about to publish an account of this case, with a memorial on the operation. Two cases have also been operated on with success by Prof. Geri, of Turin; they are published, though our author had not seen them. He knew, however, that in the first operation the fundus of the bladder was divided, and that feculent matter passed off the urethra, with the urine; notwithstanding which, the patient was cured in a short time. The manner of operating adopted by Signor

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the irritation of system from the operation. In countries subject to these fevers it is very common to observe the inflammatory diseases of winter, pneumonia, rheumatism, &c. accompanied by intermittent fever, in those subjects who have laboured under that disease during the preceding autumn, forming in these cases what may be called *symptomatic intermittent fever*, differing, however, from symptomatic fevers in frequently continuing after the disease which excited it has been removed, and requiring the administration of bark to remove it Whatever excites febrile irritation in such ague-tainted constitutions, seems capable of reproducing this fever, though it does not follow that the removal of this irritation will put an end to this capricious fever.

Geri, in his second case, our author does not know.—The two remaining operations were performed by Prof. Barbantini, of Lucca; the result of the first we laid before our readers in a former number of our Journal. The fundus of the bladder, it will be recollected, was divided in that case, and the fæces entered that viscus and passed off by urethra; the patient had a small urinary fistula left. Prof. B.'s second operation was performed in the same way, and was one of those cases where an operation is performed as the only remaining, though almost hopeless, resource. The symptoms for first two days after operation were mild; the feculent matter found its way into the bladder, and passed off with the urine. Peritoneal inflammation supervened and carried off the patient. On examination after death extensive organic disease of the bladder was observed; and much feculent matter had passed into that viscus. The case is not yet published.

The *recto-vesical* operation then has been performed in Italy, as far as we know, in *eleven* cases—of which *seven* have proved completely successful. In *two*, urinary fistulæ have remained as a sequel of the operation; and in *two* instances the operation has been followed by the death of the patient. It is to be observed, however, that both these were very unpromising cases; and that their death is probably in no way to be attributed to the mode in which the operation was performed. In the one case extensive organic disease of the bladder, which had been strongly suspected before the operation, was found to exist after death; and the other was a debilitated subject seventy years of age, who for twenty-four years had suffered from affections of the urinary organs; and where the extraction of the stone was rendered peculiarly difficult from its position, and its adhesion to the internal coat of the bladder, which itself appears also to have been in a diseased state previous to the operation.

With regard to the peculiar method of performing the Sansonian operation, all our present information appears in favour of that adopted by our author. In both cases the operation seems performed with equal facility, but the latter does not appear to be liable to the very disagreeable occurrence of the fæces finding their way into the bladder, which seems always to be the case in the former.

"It is proved," says Prof. V. "from all the observations now known on the subject, that the passage of the feculent matter from the intestine into the bladder occurs *only* where the fundus of the bladder is divided, the neck of that viscus, the prostate, and urethra remaining untouched, as we have before stated: and *never*

where the neck of the bladder has been divided, the fundus being respected, as was done by Sig. Farnese, and as I have constantly done."

A moment's reflection on the relative position and structure of the parts concerned in this operation will sufficiently explain why the fæces are likely always to find their way into the bladder in the one method of operating, and not in the other. Prof. V. however, is not of opinion that the incision should, in every case, be confined to the neck of the bladder and prostate; he conceives it much better, where the stone is found of a very large size, to extend the incision into the fundus of the bladder, than to lacerate the parts by its forcible extraction. In this we perfectly agree with our author; the only risk arising from this extension of the incision for a short distance into the fundus of the bladder, is the contents of the rectum finding their way into the former viscus; but unless the incisions were carried far back, we do not think it near so likely that they would, as when the incision is entirely made in the fundus vesicæ.

We have now brought to a conclusion our analysis of Prof. Vacca's Memorial, of which it has been our object to give as full an account as our limits would admit, from the importance which we attach to the subject. Prof. Vacca has our sincere thanks for the information he has given us, and which we have taken the earliest opportunity of laying before our readers—thus forwarding the object of his Memorial, which was to make more generally known in Italy the new method of operating, with the reasonings and observations upon which it was supported. If that distinguished surgeon has not, in the present instance, the merit of discovering, he certainly has that of improving, an operation, which without having seen performed, we cannot help expressing our belief will, at no very distant period, supersede all other operations for the extraction of the stone. It seems to us, with our author, to possess all the advantages of the other methods of operating, with fewer inconveniences than any of them. The operation itself seems of easy performance, and void of any danger to the patient, as far as the incisions are concerned. It allows abundant space for the extraction of the largest stone, without bruising or lacerating the wounded parts; (this we consider its greatest advantage;) and hence obviates the necessity, in any case, of breaking down the stone—often a difficult, always a dangerous and painful operation; and when the stone, from its friable nature, is accidentally broken, the direct and depending opening which it presents will greatly facilitate the extraction of the broken fragments, and thus diminish the danger of nuclei for new concretions being left in the bladder.

VIII.

I. *Practical Observations on Chronic Affections of the Digestive Organs, and on Bilious and Nervous Disorders; being an Attempt to combine with English Practice, some useful Methods of Cure employed on the Continent. Also, Remarks on Warm Mineral Waters in general, and on the Use and Abuse of the Cheltenham Waters.* By JOHN THOMAS, M.D., many years Resident Physician at Toulouse, now practising at Cheltenham. Octavo, pp. 168. Cheltenham, 1820.

II. *Dictionnaire des Sciences Medicales*, Vol. V. article "*Clysma.*" Par M. BARBIER.

III. *Dictionnaire des Sciences Medicales*, Vol. XLIX, article "*Sangsue.*" Par M. MERAT, M.D.

THE attempt to introduce improvements from foreign countries into our own, is, at least, meritorious; and how far Dr. Thomas or ourselves may be successful in this way, time must decide. In the mean while it is our duty first to lay before the public an outline of our author's labours.

Dr. Thomas informs us that he has had extensive practice, for many years, in a southern climate, and that his experience there has verified the pathology and therapeutics of Dr. Hamilton and Mr. Abernethy, whose writings he greatly eulogizes.

"In the slighter pathology or mere functional disorders of the digestive or chylopoiëtic organs, the only addition I have been under the necessity of making to the use of the blue pill, calomel, or some drastic purgatives in small doses, was that of clysmas, and warm baths,—but in chronic inflammations, or congestions of the different cavities, particularly that of the abdomen, I have found much advantage in depleting those vessels that contribute to feed the *vena portarum*, as well as other veins in a state of congestion in the tissues or parenchyma of the abdominal viscera." 9.

The first case brought forward by Dr. Thomas is in illustration of the effect of leeches applied to the anus, with blue pill and drastic purgative medicines internally.

Mr. D———, æt. 30, of Toulouse, naturally of delicate constitution, had been suffering under ascites and anasarca for upwards of two months, attended by a respectable physician of the above city, who considered the disease a slow conversion of external rheumatism upon some internal organ. Our author, on examination, could find nothing but a fluctu-

ation in the abdomen, the parietes were so stretched. There was an emphysema between the third and fourth, and between the fourth and fifth ribs, on the right side of the thorax. The French physicians, from this circumstance, concluded that the disease was in the right lobe of the lungs. On the 8th of September, 1810, when our author first saw the patient, his tongue was white and dry, pulse weak and irregular, skin sometimes hot, sometimes cold, urine high-coloured and scanty, bowels costive, nights sleepless, respiration difficult and laborious, strength exhausted, no appetite. His French regimen was bouillon every four hours, with a table spoonful of wine immediately upon it.

After an enema, and some draughts with the acetate of ammonia, Dr. Thomas prescribed a decoction of taraxacum and gratiola, with supertartrite of potash, to which the French apothecary added some lean of veal. This medicine produced daily some copious alvine evacuations, generally of a depraved kind. The urine became more plentiful, the pulse more regular and full;—in short, a general amendment and an increase of strength were obviously observed to keep pace with the evacuations." The abdomen soon became so reduced that the state of the individual organ could be ascertained; and, on examination, the liver was found to be "much enlarged," and to be felt full two inches below the false ribs.

"The emphysema on the right side of the thorax appeared no longer problematic, the diaphragm being forced into that cavity by the increased volume of the liver producing that phenomenon." 19.

We really are at a loss to know what Dr. Thomas can mean by emphysema in this case. The word, both from its Greek derivation* and common application, means an elastic swelling caused by the introduction of air into the cellular membrane. How an enlarged liver could produce this effect between the ribs is beyond our conception.

Our author now ordered eight leeches to be applied to the anus, and five grains of the quicksilver pill to be taken every night, continuing the medicated broth before described. In four days—

"The liver sensibly diminished—the stools approaching their natural colour—urine plentiful—the anasarca nearly dispersed,—no fluctuation perceptible in the abdomen, and the skin acquiring that softness inseparable with [from] health—the pulse 80 and regular. The patient expressed a desire to eat—the breast of a

* ἐμφύσαω.

roasted chicken was allowed him, which he ate with great pleasure with the end of a roll and a glass of wine and water." 20.

The same remedies were persisted in, with the addition of another leeching to the anus, and a blister to the region of the liver. The patient shortly recovered, by a perseverance in the blue pill, and simple decoction of dandelion.

We suspect, from some little experience, that enlarged livers and consequent dropsical effusions, will not generally be found so tractable as in the above case. At the same time we have nothing to object to the mode of treatment pursued.

The next case detailed by Dr. Thomas, is that of a cattle drover, of irregular habits, who had been complaining for some months of various dyspeptic symptoms, which so often mark hepatic derangement; such as anorexia, acid eructations, palpitation of the heart, languor, heartburn, dejection of spirits, headach, emaciation, debility. The complaint had been treated as nervous, and unsuccessfully. Our author found him, on the 13th October, 1813, with the following symptoms.

"I found his skin hot and dry, his tongue much furred with a buffy or yellow tinge, his pulse small, weak, ranging from 100 to 110, no appetite, a bitter taste on the tongue, much thirst, headach, a pain on the top of the right shoulder, his bowels very irregular, generally costive, but sometimes passing a small quantity of alvine fluid, perfectly characteristic of those partial excretions often met with in deranged functions of the colon, the urine scanty and high-coloured; on examining the state of the abdomen, I easily discovered the liver to be preternaturally large, and its convex surface very sensible to the touch. The patient had been ill nearly eight months, and was much reduced in strength—and towards evening the feet and ankles were a little swelled. I began by ordering the application of eight leeches to the anus, and the next morning an ounce and a half of the oleum ricini was given him in a little broth; he had two copious evacuations of dark greenish matter, with scybala." 25.

Calomel and rhubarb. blue pill, leeches to the anus, blister to the hepatic region, the warm bath, decoction of dandelion with carbonate of soda, restored him to health in little more than a month.

In the next case, a man of rather irregular habits, our author found considerable enlargement of the liver, with sallow complexion, yellow conjunctiva, habitual costiveness, scanty urine, frequent, small, weak pulse, skin dry and hot, decubitus difficilis on the left side, failure of strength and appetite, sense of fulness after taking the least nourishment.

Glysters, leeches to the anus, aperients, blue pill, and diluents, until the mouth became sore.

"When his mouth became sore, I judged it necessary to discontinue the blue pill; his pulse was now reduced to 80, his stools regular, and approaching a natural colour, his urine much improved in colour and in quantity; the skin had resumed its natural feel, and had it not been for his mouth, he said he could eat a hearty dinner." 33.

In a month from the time he came under Dr. Thomas's care, he returned home pretty well. We shall not enter into the analysis of any more of the cases detailed in this volume. The foregoing will convey a very good idea of what our author's practice was, and to what point his therapeutical indications tended.

"I have dwelt, some may say too long, on the advantage of depleting the abdominal venous system by the application of leeches to the anus. I have insisted on the usefulness of clysmas. I shall conclude by recommending the combination of warm mineral baths, with the internal use of mineral waters in simple functional disorder of the digestive organs, and by pointing out the necessity of employing that combined treatment to consolidate the cure of chronic affections of any of those organs, after the oppression occasioned by the too great accumulation of blood in that organ, shall have been relieved by depleting the abdominal venous system, and other means already mentioned." 91.

Our author informs us that tartrite of antimony is a medicine much used in France, given in very minute doses: for instance, one grain in eight common wine bottles of water; a bottle to be drunk in the 24 hours, and this continued for weeks or months. This dilute proportion is found useful in incipent affections of the chest.

Dr. Thomas praises, as may be naturally supposed, the waters of Cheltenham, as alteratives and aperients, "sufficiently strong to fulfil all the indications a rational and experienced physician can require." The muriates and carbonates are esteemed the most valuable of the component parts of these waters, but their virtues, he thinks, are enhanced by the small proportion of sulphates that enter into combination with them, and prevent their irritating effects by keeping the bowels open. Our author's observations on these waters, and their chymical analysis, taken from Dr. Scudamore's work, we shall pass over, of course, in order to notice certain continental mineral springs. Most of those glanced at by our author are of temperature, varying considerably in degree. None of them, he observes, are so highly impregnated with saline principles as the Cheltenham

waters. "Balaruc comes the nearest in quantity of salt held in solution. These waters are, in temperature, as high as 116°. By being prescribed in baths, at the same time that they are internally administered, they produce a purgative effect without irritating. These waters are celebrated in bilious and paralytic affections. The waters of Spa contain much less saline ingredients than those of Cheltenham, but they are highly gaseous.

"Nothing is more easy than to convert Cheltenham waters into Spa water; if to one part of Cheltenham waters at the bottom of a glass you pour two parts of soda water, so pleasant and so fashionable a beverage, you will then have Spa water in no respect inferior to the original." 135.

About four leagues from Bagnares are situated the most renowned and ancient mineral waters of the Pyrenees—Bareges, where Cæsar and Sertorius drank from the salubrious springs, and erected noble monuments.

"Bareges is situated in a valley of that name in the heart of the Pyrenean mountains, it is covered with snow more than half the year; there are only a few houses inhabited during the winter; the different tradesmen repair there in the summer, and occupy temporary huts for the space of four or five months, and the company in general is very indifferently accommodated, excepting those persons who arrive early in the season, and engage the few decent apartments to be found in the place. The country is barren, and inspires every other idea but that of comfort; yet such is the reputation of these waters, that persons of the highest rank of both sexes flock to them from all parts of Europe. I have known some highly

be effected at Cheltenham, where the principal ingredient is already at hand, the Cheltenham water; the caloric, sulphuretted hydrogen gas, &c. could be easily added, and English patients might be indulged with Bareges, or any other baths, without foregoing the comforts of their own country." 140.

Dr. Thomas thinks that the warm bath is in far too little use in this country, and that, when employed, the immersion is not long enough continued. "What effect can be expected from a warm bath of ten, or at most fifteen minutes, which is the general practice in England?"

"Upon the Continent, where so much good is produced by this powerful remedy, no one thinks of recommending a patient to stay less than an hour in the warm bath; and at Ussat, where so many cures have been effected by means of the bath, and by such means *only*, I have known many weakly delicate patients take two baths of one hour each every day for three weeks without intermission; and I have no doubt in my mind, and the same conviction pervades medical men in general in France, that it is owing to this manner of taking the warm mineral baths, so much good is effected by that remedy; and by parity of reasoning, I may say that little good is obtained from them in this country, because there is not sufficient time allowed for bathing." 151.

We must now conclude our analysis. The chief object,—and we might say, the chief merit, of the work before us, consists in recommending strongly to the practitioners of this country the auxiliaries of anal leeching, enemata, and the warm bath, as practised on the Continent. Our readers are well aware, that, in the different series of this journal, we have repeatedly drawn their attention to these subjects. In doing so now again we may be accused of tautology; but we shall here, once for all, state it as our firm conviction, that in medicine, as in religion, the great and fundamental truths must be not only brought forward, but *reiterated* from time to time, so as to be kept constantly before the eyes of the young who are backward enough in learning them, and the old who are forward enough in forgetting them.

Under this conviction we shall here introduce some observations drawn from our own experience, reflections, and researches, on subjects which are far too little studied or attended to in this country.

Enemata. The rectum and colon to which glysters are applied, present a very extensive surface, endued with no inconsiderable share of sensibility, being plentifully furnished with nerves, blood-vessels, absorbents, and exhalents. In this respect, it is true, that their surface falls

far short of the stomach and small intestines, where the sensibility is exquisite, and the play of sympathetic associations most extensive. Yet the portion of bowel concerned in glysters is lined with a membrane that has considerable sympathetic connexion with the other great organs of the body, and may therefore be made the medium of much medicinal agency on the constitution. Every one knows that where deglutition has been impeded, the absorption from this intestine alone has long sustained the vital actions, though absorption is probably one of its weakest powers. In general, the quantum of active remedies injected into the colon should be double or treble that introduced by the stomach.

The common effect of all kinds of enemata are the evacuations of the lower bowels. Even water injected by the anus excites the action of the great intestines to an expulsion of their contents. But when medicinal agents are added to this simple menstruum, another, or ulterior, effect is produced besides the evacuation of the bowel. Suppose, for instance, an enema, containing infusion of senna, rhubarb, jalap, or colocynth, or solutions of the neutral salts, be thrown up, and allowed to remain for some time in the colon. An excitement, more or less powerful, is produced throughout the mucous membrane of the gut. The vital properties of this membrane are developed—the blood flows in greater quantity, and with greater force into the capillaries of its texture, which becomes swelled, reddened, hotter, and more sensible—in short, a determination of blood and nervous excitement is made, pro tempore, to this portion of the primæ viæ, which becomes a kind of centre of vital action for the time. Next comes on some degree of pain, and colicky contractions, followed, more or less quickly, not only by a detrusion of the contents of the small intestines into the large, but of the contents of these last also, together with the additional secretions poured out from the mucous membrane of the bowels during this artificial excitation.

This process may be very advantageously employed by the physician, in remedying or mitigating many troublesome affections. In constipation, and all the numerous ills thereon dependent, an excellent auxiliary, if not a principal remedy, is to be found in the regular use of aperient lavemens. In spasmodic dyspnœa, in headache, in gastrodynia, and various other cases, the fluxionary movement which is thus determined to the lower portion of the alimentary canal, becomes highly beneficial. In a case of violent colic with vomiting, M. Barbier saw instant relief produced by

throwing up an injection containing the infusion of a drachm of colocynth. To females who have weaned their children, gentle purgative injections are of the greatest service in preventing the ill effects arising from the suppression of the lacteal secretion. Accoucheurs know well the power of stimulating injections, where the uterus is torpid, in recalling its energies and renewing its contractile efforts.

Acrid purgative enemata have always been found useful in apoplexy, paralysis, and colica pictonum. It need hardly be said that this class of enemata are detrimental where any irritation or inflammation exists in the mucous membrane of the lower bowels in particular.

Tonic and Astringent Lavemens have been often employed, especially on the Continent, in chronic dysenteries and diarrhœas, in passive uterine discharges, incontinence of urine, chronic blennorhagies, &c. The cinchona is often successfully administered in this way, when it cannot be taken by the mouth.

What our continental brethren term "*exciting glysters*," are generally composed of infusions of wormwood, chamomile, horehound, sage, rosemary, baum, wild valerian, anise seed, fennel, juniper-berries, turpentine, assafœtida, &c. &c.

These stimulating and aromatic substances first produce an excitation of the intestinal mucous membrane, which is soon communicated to the whole nervous and vascular systems, producing an increased activity of the secretions and excretions. These agents, therefore, might be turned to much use, were the prejudices against the process obliterated as they ultimately must be. Hoffman (De Clysterum usu Medico) recommends the above class of lavemens in many chronic diseases accompanied with debility, flabbiness of the muscles, paleness of the skin, and general want of energy in the system. But it is in colicky affections, attended with distressing flatulencies, atony of the intestines, and fœcal accumulations. that M. Barbier particularly recommends these stimulating and aromatic injections, to which may be added cathartic ingredients occasionally, as solutions of Epsom salts, aloes, or infusions of senna. We have ourselves seen great advantage from injections of this description, in the troublesome complaints above mentioned, to which sedentary females are peculiarly prone. This class of lavemens ought to be prohibited, of course, in all cases where there is febrile heat, inflammatory pain, or any increased excitement of the system.

More diffusible stimuli than the above, to wit, port wine, and even alcohol, have been used in lavemens. It is a curious fact that inebriety more quickly results from vinous or spirituous

glysters than from analogous potations taken into the stomach.

Narcotic and Anodyne Glysters are prepared from poppy heads, opium, hyoscyamus, &c. These exert a powerful influence not only on the great intestines, but on the stomach and the whole system. In this way they allay pain without so much deranging the stomach as when they are taken by the mouth. In the pains attending nephritic and calculous complaints, we have a valuable resource in anodyne lavemens internally, and opiate fomentations to the region of the bladder, perineum, and loins. In these cases from 50 to 100 drops of laudanum in three or four ounces of starch, should be thrown up the rectum, the patient keeping quiet in bed for some time afterward, to prevent its coming away. At the same time a decoction of poppy-heads, to which an ounce of laudanum is added, may be applied to the pelvic region by means of flannels, in the way of a fomentation. The various cases to which anodyne injections are applicable, will easily suggest themselves to the intelligent practitioner.

What are termed on the Continent, *laxative and emollient lavemens* are those prepared from laxative, mucilaginous, farinaceous, oily, and gelatinous substances, used by themselves, or as vehicles for other medicinal agents, as opiates, cathartics, stimulants, &c. The substances most commonly employed for the preparation of this class of injections, on the Continent, are manna, cassia fistularis, sweet oil, leaves and roots of marsh mallows, violets, lin-

with exercise, on horse and foot, and regulation of the bowels by small quantities of the blue pill with supertartrite of potash, sulphur, and honey, are the most effective items in the methodus medendi. All acknowledge the importance of assafœtida, turpentine, and other injections in cases of worms. A few observations on the mode of using injections shall terminate this part of the subject. We have found no instrument so good as the common syringe with the crooked tube, so as to be used by the patient himself. In cases of common torpor of the bowels, either as a substitute or auxiliary to internal medicines, a pint of warm water, in which is dissolved a little yellow soap, will generally be sufficient to bring away a stool. We do not think it necessary to keep it in more than two or three minutes, if so long. The great object is, by the mechanical distention of the rectum and colon, to excite the action of their contractile fibres, while the current of the fluid, passing off, carries with it whatever fæces may be lodging in the lower portion of the canal. If the fluid is allowed to remain longer than a few minutes, the *conatus ejiciendi* generally goes off, and the water is absorbed, without inducing a motion. But where it is necessary to combine salts, or other aperient medicine with the water, then we consider it best to take the enema while lying on the bed, and to keep it in half an hour or more, in order that the medicines may produce their effect on the mucous membrane of the bowels, and increase their secretions, before passing off.

Leeching. Before closing this article, we shall introduce a few observations relative to local blood-letting by means of leeches. These useful animals were familiar to the ancients, and from their avidity for blood, were denominated sanguisugæ. Pliny informs us that elephants, who happened to swallow them, were cruelly tormented in consequence, and the human species has not escaped their ravages in this way, as has been proved on several occasions. We shall pass over the natural history of the officinal leech. It is difficult to say on what these creatures live, except it is the water itself; for their sanguisuction appears an act of unparalleled gluttony, which they carry to such an excess as destroys them, unless they are forcibly disgorged. It is curious that if there be too many of them in a vessel, in proportion to the quantity of water, the stronger will destroy the weaker, and devour them for sustenance. The more water there is about leeches the better they are preserved. One hundred leeches should have at least three quarts of water. It should be changed twice a week in summer, and once a week in winter. In very hot

weather it must be changed every two days. Leeches ought also to be washed occasionally, to cleanse them of the mucous and excrementitious substances which adhere to them. By putting them on a sieve, fresh water may be poured over them till they are clean; and if this will not do, they must be cleaned individually with the hand. The vessels in which they are kept should be very carefully cleansed, and exposed for some time to the pure air to dissipate any disagreeable odour which is prejudicial to the leeches. Dead individuals ought to be immediately removed, otherwise they corrupt the water. The vessels in which leeches are kept should not be exposed in windows to the rays of the sun. The cooler they are kept the better, provided it does not approach the freezing point. When changed, water of the same temperature is to be used. Nothing is so destructive to leeches as vicissitudes of temperature in the fluid they inhabit. It is a curious fact, that these animals have been frozen for a month together, and gradually thawed, with preservation of life. When this accident happens, therefore, they are not to be thrown away.

In order that leeches may bite readily and suck well, they should be made to *fast* for a few hours before they are applied—that is, they should be taken out of the water, and put into a cup, tied over with linen, for four or five hours in winter, and three or four in summer. They are then to be put into a dry and fine napkin, and gently rubbed, which irritates them, and makes them bite keener. If it be winter, they are the better to be breathed upon, for a minute or two, before application, the warmth of the breath making

part to which leeches are to be applied, should be carefully deprived of hair, which greatly obstructs their operations. The part also should be wet with a little milk, or sugar and water, which facilitates the biting, though it is much neglected in this country, where the management of leeching is not nearly so well understood as in some other countries. When they ramble about much, and are not inclined to bite, they must be put in a wine glass, and the vessel reversed on the part. By this means they will generally be made to take in a little time. When they are fixed, they should be kept perfectly quiet, and covered with a fine napkin, over which a piece of flannel is to be thrown, in order to defend the patient from cold, especially if the application be to the chest or abdomen for internal inflammation. Leeches generally require the space of an hour to fill themselves completely, when they fall off, and usually forfeit their existence as the price of their gluttony. Some of these animals go to sleep when they are full, and yet keep hold of the part. When this is the case, the edges of their lips are to be raised with the point of a pin, and they then fall off immediately. Some people cut of the tails of leeches, and allow the blood to run off there. This is a useless proceeding; for, in three cases out of four the leech lets go its hold when cut, and if it does not, the bite would bleed just as much as the wounded leech.

If by causing the leech to vomit up its repast by means of vinegar or salt, its life can be preserved, so much the better —in this country where leeches are scarce and dear. On the Continent, they seldom take this trouble. It is rare that we are anxious to stop the hæmorrhage from leech-bites. On the contrary, we are generally anxious to promote it; which may be done by sponging the part frequently with warm water. The sponge or towel should not be *rubbed* on the bites, as the lips of the wounds become everted and painful by this means. In the intervals of sponging, the bites should be covered with a soft napkin till it becomes soaked with blood, when it is to be removed, and after sponging, replaced by another. When leeches are put to the anus, pudendum muliebre, or other part where warm water can be applied, then the hip-bath or semicupium is to be recommended.

Among the accidents attending leeches is the misfortune of swallowing them, as happened to some of the French soldiers; for example, in Egypt. If they adhere to the fauces, or where they are within reach, they should be seized by the forceps and extracted. If they are beyond reach, salt water, or vinegar and water should be swallowed, and

after some time, an emetic administered. If they insinuate themselves into the rectum or vagina, then injections of the above description should be thrown up.

Sometimes an excessive pain and irritation accompany, but rarely succeed, the leech-bites, owing to idiosyncrasy of constitution. Nothing can be done in such cases but apply warm anodyne applications, if the pain continues. After a considerable bleeding by leeches, especially if the patient does not keep quiet and horizontal for some time, there is occasionally faintness, as after venesection. It only requires quietude, some light restorative, and the recumbent position.

It is a curious fact, which is worth attending to, that if food be taken soon after leeching to any extent, and before the equilibrium of the blood is, as it were, repoised, a well-marked indigestion ensues, manifested by paleness of the face, weakness, anxiety, vertigo, sickness at stomach, and sometimes a diarrhœa;—symptoms which go off in 24 hours, if not imprudently kept up by too much food.

Many instances of obstinate, and a few of fatal, hæmorrhage have occurred after leeching. When the ordinary means of restraining the flow of blood fail, and danger be apprehended, especially in the case of infants, the actual cautery should be had recourse to—a hot knitting-needle or probe will answer the purpose very well.

It appears to us that, on the Continent, especially in France, local bleeding, by means of leeches, is too much trusted to, where general blood-letting ought to precede or accompany it; while in England, phlebotomy is too exclu-

inflammation, so commonly attendant on organic affections, especially of the heart or large vessels, leeching stands pre-eminently useful. These local congestions are mostly conspicuous about the head, threatening or producing apoplexy; and leeching becomes an important preventive check to this formidable event. We need not dilate on the paramount efficacy of leeching in those local inflammations of the subcutaneous tissues, and of the joints, whether arising from constitutional diathesis, accidental violence, or surgical operations. These are sufficiently appreciated in this country by every surgeon.

Local bleeding, by means of leeches or scarificators, is peculiarly useful in persons of delicate constitutions, in infants, females, and old people, where general blood-letting may not be deemed necessary.

In producing what is termed a *derivation* of blood from one part to another, there is something in leeching which seems to unite the advantages of general blood-letting and blistering, to a certain extent. The blood drawn by a considerable number of leeches affects the whole vascular system, while the irritation of the bites keeps up a determination to the part itself.

Here we rest for the present. To those who may consider that we have been too minute on such a trifling topic as that of leeching, we offer the following sentiment of Merat;—"Ces precautions que nous avons detaillées avec soin ne paraîtront minutieuses qu'a ceux qui ne savent point que tout est important en médicine lors qu'il s'agit de soulager."

IX.

Practical Remarks on Disordered States of the Cerebral Structures, occurring in Infants. By Whitlock Nicholl, M.D. M.R.I.A. F.L.S. &c. &c. One vol. small octavo, pp. 94. London, 1821.

Dr. Nicholl is an acute observer and a close reasoner—and although we think his distinctions and descriptions are too minute for general application to clinical practice by the great body of the profession, yet we believe that his observations will be acceptable to those of the higher orders of the faculty who have zeal and ability to examine and apply them.

Dr. Nimmo is perfectly correct when he observes, that consequences of a diseased state are often confounded with the causes from which they arise—a remark which is particularly applicable to affections of the cerebral structures —more especially hydrocephalus. We believe him correct in considering the effusion, in a majority of cases, as the sequela or effect of previous disease.

"There is a state or condition of the cranial brain in infants, which may be called *a state of irritation*, an *irritated state*, or, in one word, *irritation*. What this peculiar condition of the cerebral structure is, I cannot explain. It is a state, distinct from that which is called inflammation of that structure, for it may exist without any perceptible increase of the quantity of blood that flows through the cerebral blood-vessels. It is a state, under which, inordinate effects arise from ordinary impressions upon different parts of the nervous system. In its perfect form, and under a high degree of it, it is a highly sensitive condition of the cranial brain, a condition the very reverse of that under which sleep occurs. Under such a condition of the cranial brain, the child is wakeful, scarcely ever sleeping: it is attentive to every sound, and to every object of sight; its temper is irritable: the retina is highly sensible to light, so that the child quickly winks if its face be turned towards the window, or towards a candle: the pupil is, in many instances, more or less contracted, but this is not always the case: the limbs are much in action: the head is often moved about, or is shaken from side to side; the child cries without any apparent cause, and it is soothed only by tossing it, by carrying it about, by putting it to the breast, or by letting it suck the cheek of the nurse, or its own fingers: the secretion of tears is, in many instances, increased, causing suffusion of the eyes, and redness of the edges of the lids: the secretion of the schneiderian membrane may be increased, causing a stuffed state of the nasal passages, producing sneezing, and exhibiting the appearance of that state which is popularly called a *cold*: the bowels are, in many cases, relaxed, yet no disordered state of the stools may appear. During such a state as I have described, there may be a degree of animation, and a quickness of observation much beyond what are commonly met with in children of the same age. So that, although a morbid condition of the cranial brain be present, the child may be considered as particularly healthy, on account of its being wakeful and lively, and sensible to the most trifling impression. But it frequently happens, that an attentive observer may detect other symptoms: the child may start in its sleep; it may be very readily awakened: when awake, it may start at the slightest noise, as at the shutting of a door, at the moving a chair, at passing the finger over the wicker-work of its cradle, or on being slightly moved, or if touched gently: a sudden frown may pass over the forehead and may quickly disappear: the eyes may be closed irregularly, or alternately, or a winking of one eye, or frequent winking of both eyes, or a firm closing of both eyes, may be, from time to time detected: the hand may be raised frequently

to the head; the child may cry, without any evident cause, as if it were pricked with a pin; at other times, it may shriek; the fists may be clenched, the thumb being bent in, and laid flat across the palm of the hand, the fore-arms being bent upwards on the arms. Should a similar condition of the spinal brain be present, the child may be bent backwards, presenting a state of *opisthotonos;* its legs may be drawn up, while the head is thrown backwards." 13.

Such a state, Dr. N. thinks, constitutes what may be termed *sensitive erethism.* An increase of heat in the head or body may sometimes, but by no means constantly, attend this cerebral erethism.

There is another form of infantile erethism characterized by want of animation, fretfulness when roused, want of sleep, and yet "a state that can hardly be called waking," indifference to surrounding objects, pallor and chilliness of the body, rolling of the eyes, plaintive moaning or shrieking, jactitation of the hands and other minor symptoms, which our author denominates *torpid erethism.*

Scrofulous children have generally the greatest tendency to cerebral erethism, and where this tendency exists, the slightest irritation of the nervous system will call it into action.

The etiology of this state is extensive; but among the most frequent causes are impressions on the extremities of the cerebral nerves. Hence dentition, worms, depraved visceral secretions, drastic purgatives, inactive liver, congestion of the hepatic system—"in short, whatever causes great irritation in any part of the body, whether in any of the great cavities, or on the surface of the body, may produce an erethismal condition of that brain with which the nerves of the irritated part principally communicate."

In the milder forms and earlier stages of this affection, the symptoms which it produces may be great wakefulness, great sensibility to slight impressions, with restlessness and high animation—symptoms which are generally hailed by nurses as proofs of health and vigour of the child, and consequently the disease is often overlooked. It is also often overlooked when it happens to arise during the presence of disorder of some other part, or where its assemblage of symptoms veils the true seat of the disease.

"Thus, such a condition of cerebral substance, in what way soever it arises, may produce an assemblage of symptoms to which the general term *fever* is applicable; or it may cause convulsive affections, or sundry other derangements of functions; yet our attention may be engrossed by these several effects, while the cause from which they arise is entirely overlooked." 22.

The spinal brain (as it is termed by our author) is also liable to the erethism in question, which is sometimes propagated from one brain to the other, or affects them alternately. When it exists in the spinal brain alone, the principal symptoms to which it gives rise, according to Dr. Nicholl's observations, are:—

"Restlesness; irregular and incessant movements and twitchings of the extremities; writhing of the body; hurried respiration; and irregular action of the alimentary canal." 23.

This state may be induced by injuries, vicissitudes of temperature, by impressions on the nerves of the abdominal viscera, "and especially by morbid states of the alimentary canal"—in short, from irritation of any of those nerves communicating freely with the spinal brain.

Erethismal states of the cerebral structures are not confined to infancy. They present themselves very frequently in adults, giving rise to symptoms closely resembling those observed in children.

"Irritability of temper, inability to bear the effects of the most trifling sounds, wakefulness, restlessness, febrile symptoms, the whole train of what are called *nervous symptoms*, convulsive affections; these may, severally, be traced, in many adults, to erethismal conditions of one, or both, of the cerebral structures." 27.

As an increased circulation in the cerebral vessels tends to the production of these erethismal states, so does erethism, on the other hand, tend to increase the circulation. The two states united, our author thinks, constitutes what is termed INFLAMMATION—a state including erethism, of course; but erethism of the cerebral structures may exist independently of any perceptible increase of the quantity of blood in circulation. High erethism and circulation in infants, constitutes, Dr. N. imagines, acute inflammation, and less sensitive erethism, with moderate circulation, subacute inflammation. A moderate increase of circulation, with torpid form of erethism, may possibly constitute chronic inflammation.

"Inflammation of the cranial brain in infants is characterized by the following symptoms: redness of the conjunctiva; highly-contracted pupil; great intolerance of light, and of sounds; suffusion of the eyes; great restlessness; wakefulness; charged state of the blood-vessels of the head; throbbing of the arteries of the neck and head; dry, hot mouth; thirst; startlings; shriekings; hurried, unmeaning manner, and expression, of countenance; pulse, throbbing, full, strong, increased in frequency." 29.

The spinal brain may also be the seat of the phlogosis.

but simple *plethora* of the cerebral vessels our author characterizes by the following symptoms:—

"Increased heat of the head; a full eye; a redness of the countenance, with a want of animation; a heavy, listless, state;* indisposition to move the head; uneasy sense of fulness in the head, causing the child to seek support for the head; giddiness; shaking of the head; uneasy respiration; sighing; the pupil either of a natural size, or rather dilated; sickness; loss of appetite; heat, and dryness of the mouth and skin; an inactive state of the bowels; a sensibility to impressions, but a heedlessness of them; a turgid state of the vessels of the head; the pulse not much accelerated, full, perhaps oppressed." 31.

Dr. Nicholl distinguishes a plethoric state of the veins of the head by the term *congestion;* in which state, he observes, there is general coldness of the child's body—jactitation of the head—comatose disposition—prominence and fixedness of the eyes—dilatation of the pupils—grinding of the teeth—irregular action of the facial muscles—indistinctness of vision—insensibility, more or less complete, to impressions—strabismus—torpor of bowels—scanty or suppressed secretion of urine—slow oppressed pulse—slow laborious respiration.

Irritation of the cranial nerves, as of the nerves of other structures, disposes the exhalents of the part to throw out an increased flow of fluid. When the irritation, however, is on the anti-cerebral extremities of the nerves, for instance, in the liver or other abdominal organs, the effusion may be so gradual in the cavities of the brain, as to take place to a considerable extent, without marked or decided symptoms.

We cannot follow our author through his almost endless distinctions and descriptions, and our reasons for not following him, he himself shall furnish.

"I think that I am correct in stating, that each of these conditions of the cranial brain may exist as a distinct affection, and that in the pure, uncombined, form of each of these states, each condition has distinguishing characters, by which its presence is denoted. But, when we review these various conditions, and consider how they may be blended; when we look over the list of causes from which they may severally arise, and see how many of the causes of each condition may exist at the same time; and when we take into the account, the influence which various modes of treatment

* Sic summè plethoricos sæpe invenimus debilissimos; post largam vero sanguinis missionem redeunt illicò pristinæ corpori vires. *Van Swieten, Comm.* II. 270.

have upon disease, how much they alter its features, and modify and interrupt the train of symptoms; we shall be prepared to meet with appearances very different from those which are *traced upon paper*, and we shall not be surprised at being called upon to treat cases, in which there is an assemblage of symptoms, that baffle all our attempts at classification, and defy all nosological distinctions." P. 56.

We are no advocates for rendering medicine so simple a science, that he who runs may read, and he who reads may easily comprehend; but we do think that an opposite extreme may be run into, and that hair-breadth differences and distinctions may be so multipled that the *actual clinical practitioner* will be frightened from all attempts to gain information from the writings of others.

In the therapeutical portion of this little volume we found much to commend—and recommend to our junior brethren.

The most common affection of the cranial brain in infants is *erethism*—the other conditions of that organ being, in many instances, consequences of such erethism. Where there is predisposition in the child, marked by precosity of intellect, and the physical characters of scrofula—and especially where others of the family have laboured under cerebral affections, we must cautiously guard against those exciting causes of cerebral erethism, which are well known to all intelligent practitioners. The diet in particular should be attended to. Our author justly observes, that "nurses never take the digestive powers of a child into consideration, nor do they ever seem aware that the process of digestion is necessary to convert food into aliment." When an infant is brought up by hand, it is difficult to restrain the nurse from exhibiting food of too rich quality. The stomach and duodenum become overloaded—the chyme becomes unhealthy—the liver congested—and sympathetic irritation propagated to the brain. On the other hand, it ought not to be forgotten that—

"The state of the alimentary canal in infants is much influenced by the condition of the cerebral structures. Thus, an altered state of the cranial brain may induce sickness, disordered secretion of the fluids which flow into the alimentary canal, and a relaxed, or constipated, state of the intestines. Disorder of the spinal brain may also quicken or retard the peristaltic action of the bowels." 67.

On the hepatic affections, so very common in children, Dr. N. makes many judicious remarks, but not particularly novel.

"Calomel," says he, "is given to promote the secretion of bile; it is also given where that fluid is too abundantly secreted. The

mode of exhibiting it must be adapted to the particular state; in the former case, small doses of it should be given in repeated succession so as to produce the specific effects of mercury on the liver; whereas, if we want to remove from the alimentary canal an inordinate quantity of bile which has flowed into it, we should give one powerful dose, so as to produce its effects as a strong purgative." 73.

In scrofulous constitutions we should be careful, of course, in the administration of this remedy.

"In such children, if we want to promote a more copious secretion of bile, it will be more prudent to endeavour to attain that object by employing other remedies, such as nitro-muriatic acid, externally and internally, small doses of sulphat of potash with decoction of aloes, wine of aloes, or extract of taraxacum. Or if we find it necessary to employ mercury to promote the action of the liver, the mercurial pill, the gray oxide of mercury, and the hydrargyrus cum creta, are less objectionable forms of that mineral. These several means may be assisted by the warm salt bath, by friction with salt, by applying a blister over the region of the liver, and by clothing the child in flannel." 74.

Dr. N. repeats the observation of some practitioners that the stools resembling "*stewed spinach or boiled laver,*" are produced by the calomel prescribed. All we can say is, that *facts* are adverse to the *theory*. We have repeatedly seen these stools where no calomel had been given, and we have seen them dislodged by scammony, jalap, and other purgatives than mercurial. But it is curious to observe how an opinion taken up by an individual, will pass current without examination, through a whole generation of writers, and after all prove entirely without foundation. How is it, we ask, that calomel taken when a man or child is in health, will not produce *spinach* in the intestines?

To obviate the cerebral erethism, the child should be frequently carried into the open air—"its *body* and head should be frequently sponged with cold water, and it should be immersed night and morning in *cold* or tepid water." We much question the propriety of cold water to the surface of the body when an internal organ of such vital importance as the brain is in a state of erethism. We would not prescribe such a measure ourselves; but let others do as they please.

"If the wakefulness still continues, small doses of pulv. ipecac. comp. may be given from time to time."* 78.

"* The dose of the opiate must be regulated by its effect. In treating erethismal states of the cerebral structures with opiates, we must recollect

The pulv. ipecac. comp. may be advantageously combined with James's powder—especially in that form of the disease denominated *sub-acute* inflammation. Cold evaporating lotions to the head—cool, quiet, darkened room—elevation of the head and shoulders—diuretics of nitre, with acetate of potash and nitric ether—aperients—tepid bath—leeches to the temples, where the child is robust—lancing the gums—constitute the principal remedial measures of our author. When the disease is evidently accompanied with plethora, or, in other words, *inflammation* of the brain, local bleeding from the head, or even general blood-letting, must be carried to a greater extent than in simple erethism. Besides the means already pointed out—

"The bowels must be purged by calomel and saline purgatives, after which, James's powder combined with calomel and nitre may be given in repeated doses. The child must be kept in a quiet, darkened room, free from noise and disturbance.

"It may happen, when an inflammatory state of the cranial brain has existed, that the remedies made use of may remove the plethoric state of the cerebral blood-vessels, while an erethismal state of the brain yet remains. In such cases, it will be proper to give the pulvis ipecac. comp. in repeated doses, combined with James's powder and nitre, to which small doses of calomel, or of the hydrarg. cum creta, may be added; and the other rules laid down for the treatment of erethism of the cranial brain must be strictly attended to, as long as that state continues; for if the erethismal state of that organ be not allayed, the child will continue wakeful, restless, and irritable; and we may expect, that the plethoric state of the cerebral blood-vessels will, sooner or later, return; and that the child will, at length, be worn out, or permanent mischief may be established. And if, after all the marked appearances which indicate the existence of an erethismal state, have vanished, the child is wakeful, or very irritable, we must still procure rest, and allay irritation, by repeated doses of the Dover's powder, in such quantities, and at such times, as may be requisite; recollecting, that there still exists a tendency to the revival of an erethismal condition of the cranial brain, which circumstances, apparently trifling, such as the long-continued absence of sleep; any error of diet; an unhealthy condition of the alimentary canal, or in the liver; or any irritation;—may suddenly call into action." 65.

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that opium produces opposite effects in different cases, and in different doses. Opium may allay irritation of those structures, it may produce complete torpor of them, or it may act upon them as a stimulant. Our object in exhibiting opium in erethismal states must be, to allay irritation, we must therefore so administer it as to produce this effect, and this end will be best attained by giving the pulv. ipecac comp. in small repeated doses. This is a point too often overlooked.

We have much overstepped the boundaries within which we meant to confine the analysis of this little volume. If we have differed with the author on some few points, and if we have thought him disposed to too much refinement, both in symptomatology, and pathology, we have not ceased to admire his zeal, and respect his talents. We have no doubt but that Dr. Nicholl will contribute much to the advancement of medical science, and stand conspicuous among its present cultivators.

X.

A Synopsis of the Diseases of the Eye, and their Treatment, &c. By Benjamin Travers, F.R.S. Surgeon to St. Thomas's Hospital. Octavo, pp. 426. London, 1821.

In our last number from page 105 to page 133, we offered a comprehensive, and, at the same time, minute analysis of the *pathological* division of Mr. Travers's excellent work. We now proceed to the completion of our task, by a similar notice of the *therapeutics*, medicinal and operative, which this able surgeon has presented to his brethren, as the fruit of ample experience in ophthalmic surgery. If we have devoted a space, in this Journal, somewhat out of proportion to the size of the work reviewed, it was not without due consideration to the interest of the public—an interest which must always be identical with that of the Journalist himself, where the latter is *guided* by common sense and sound wisdom, rather than *impelled* by the gales of passion and personal feeling. Our reasons then for being minute in our analysis of the work before us are twofold—first, because ophthalmic science is beginning to spread extensively through all ranks of practitioners; and, secondly, because the expense of the plates cripples the circulation of the volume among those widely scattered members, or humble grades of the profession, for whose benefit *in particular* this Journal was first instituted, and we hope will be ever conducted. Where the *original*, therefore, *cannot* travel, we deem ourselves always bound to provide the best possible *substitute*—where it *can* and *ought* to travel, we hold out the strongest temptation for accelerating its progress.

The third part of the work before us is divided into four chapters, which are subdivided into sections, and occupy

altogether about 140 pages of letter-press. In this portion we were much pleased to observe that our intelligent author endeavoured "to seize upon the principles of treatment, to the exclusion of over-minute practical details."

"For it would be idle to suppose that general principles of treatment require to be enforced, after the nature of a disease is clearly pointed out. The maxims and modes of successful practice, so far as they are hitherto known, are accessible to all inquiries of ordinary capacity; and that man is unworthy of his profession who seeks to mystify them, for the purpose of being esteemed wiser than his neighbours." 245.

In the above sentiments we cordially agree with Mr. Travers.

1. *Simple Ophthalmic Inflammation.* Where this is unconnected with constitutional disorder or diathesis, the loss of a few ounces of blood, the use of soothing applications and cathartics, are sufficient to subdue it. Febrile irritation rarely accompanies this form, and when it does, it yields to the same means. In many cases of this kind, general blood-letting is unnecessary. Cupping possesses advantages over leeches, especially when the latter are applied on the eyelids, as they there produce swelling and discolouration—or even troublesome erysipelatous inflammation. In urgent cases, however, the lancet must be used, in order "to make the system sustain and feel a reduction of power." Bleeding from the angular vein and scarification of the conjunctiva are highly beneficial in chronic, but objectionable (especially the latter) in acute inflammation. In respect to lotions, he does not consider *medicated* ones of any material efficacy. Cold applications, though they are momentarily agreeable to an acutely inflamed organ, are nevertheless followed by reaction, with an increase of heat and pain.

"When, however, the acuteness of inflammation has subsided, and the sensibility of the part is in proportion diminished, the effect of cold is only tonic, and has a salutary tendency to restore the balance of circulation, I therefore decidedly prefer, as a general practice, a tepid application in the painfully acute stage of inflammation, and I appeal to general observation in proof of its efficacy in promoting a grateful sense of coolness, and a more permanent relief from pain." 250.

Our author has found narcotic lotions and fomentations very various in their effects on different people—irritating in some, anoydne in others. Though warm fomentations are best in the acute stage, they should not be continued

longer than is necessary, otherwise they prove injurious. When the vascular congestion and morbid sensibility are reduced, cold lotions, of a slightly tonic quality, may be substituted for the warm, with advantage. The sulphates of alum and zinc are the best. The œdematous elevation of the conjunctiva indicates feeble action, and is often combined with gastric and hepatic derangement. "Solution of tartrite of antimony given at short intervals operates very beneficially in reducing it."

Those ophthalmiæ which assume a chronic atonic character, ab origine, being partial in extent, void of pain, and almost solely congestive, are often restored to sanity by a single stimulus, as the vinum opii, or, which Mr. Travers considers to be equally good, a drop or two of zinc, or lunar caustic solution, or water impregnated with calomel. "Some old women use their urine with admirable effect in these cases."

In certain habits, ophthalmia, whether local or constitutional, becomes worse under the usual depletory measures, the irritability increasing as the strength fails. Here it is that combinations of calomel, opium, and antimony or ipecacuan, are peculiarly serviceable.

"In the treatment of simple acute ophthalmia the object to be kept in view is the soundness of the cornea; the organ is in no danger of deeper injury. The main indication for an activity of treatment beyond that successfully adopted in ordinary cases, is furnished by the state of this membrane. Where the sclerotic conjunctiva is much raised, and the surface of the cornea has in any degree lost its polish, and still more when lymph is effused in or upon the cornea so as to obscure vision, the anti-inflammatory measures must be as vigorous and decided as the integrity of the organ is important. Blood-letting and blisters, calomel, antimony, and the neutral salts comprise all the requisite means." 254.

2. *Strumous Ophthalmia* is almost always atonic and constitutional. Speaking generally, blood-letting is unnecessary, rough and depressing purgatives, injurious. Warm applications are useless—blisters to the nape of the neck and behind the ears very beneficial, especially where the corneal surface is affected, and the consequent sensibility augmented. Issues and setons are also of great avail.

"If the cornea be opaque, calomel, or the blue pill, or the oxymuriate of mercury should be exhibited in combination with opium, slightly to affect the system. The efficacy of the mercurial mainly depends on its combination with opium; it irritates too much if administered alone in quantity sufficient for the purpose." 260.

Here our author introduces a synoptical sketch of the

treatment in each particular form of the strumous ophthalmia, which the surgeon will consult with advantage. In convalescence after these forms of ophthalmia, the patient should use some of the following medicines;—infusion of roses—cascarilla—calumba—cinchona—steel—rhubarb and soda—with tonic collyria and gently stimulating ointments—nutritive diet, country air, shower or sea bath, in summer.

3. *Acute suppurative Inflammation of the Conjunctiva.* This is the most dangerous form; its sequelæ being lingering, and sometimes difficult of removal. It is either mild or vehement. In the mild, the cornea is not endangered, unless the disease be exasperated by stimulants. "A very slight haze of the cornea is the worst direct result of it." There is not that excessive swell of the lids, that intense pain, nor that profuse secretion, which characterizes the vehement acute form of the disease. Nevertheless, these symptoms exist in a degree requiring immediate and active treatment. The alum solution should be early substituted for the emollient fomentations necessary in the acute period. The solution should be directed in a gentle stream over the conjunctival surface, from a syringe furnished with an ivory pipe introduced at the temporal angle of the lids without forcibly separating them. Simple purging and abstinence are generally sufficient to allay the febrile irritation, which is moderate. Topical bleedings and a suppurating surface, opened by blistering the back of the neck, are of great efficacy. Pain and irritability having subsided, the discharge

brisk cathartics, nauseating doses of emetic tartar, will often be indispensable.

"The discharge, at first ropy, viscid, and sparing in quantity, becomes thin, gleety, and more abundant; as the swollen lid subsides, the conjunctiva sinks and becomes pale and flabby; and if, at this period, the pain and febrile irritation being past, the cornea retains its tone and brightness, all is well; the disease has given way, and a careful but prompt exhibition of tonics, with the use of cooling astringent lotions, will prevent its lapsing into a chronic form. But if, when the lowering practice has been pushed to the extent of arresting acute inflammation, the patient being at the same time sunk and exhausted, the cornea shows a lack-lustre and raggedness of its whole surface, as if shrunk by immersion in an acid, or a gray patch in the centre, or a line encircling or half encircling its base, assuming a similar appearance, the portion so marked out will infallibly be detached by a rapid slough, unless, by a successful rally of the patient's powers, we can set up the adhesive action so as to preserve in situ that which may remain transparent." 267.

It requires great judgment to know how far and no farther we are to proceed with depletion in these cases. Our author does not agree with those who have taken sixty or seventy ounces of blood at one time, from a patient. Perhaps, however, Mr. Travers does not make allowance for the class of patients upon whom these large detractions have been practised. It is not impossible that the surgeons alluded to may have been as capable of appreciating Falstaff's adage respecting valor and discretion, as even Mr. Travers himself. A man should state the result of his own experience, but be cautious how he censures the practice of others; especially if situated in widely different circumstances. It is but justice to say, that Mr. Travers very rarely makes any allusions to mal-practice in others, and then in a very delicate manner.

4. *Secondary Diseases of the Conjunctiva.* The granular state of the tarsal conjunctiva is a very common result of mild suppurative ophthalmia. Here the lid should be everted, and the projecting granules shaved off from the surface and orbitar edges of the tarsus, with a keen edged lancet, or, if peduncular and prominent, they will be more conveniently snipped off with the flat scissors, taking care to avoid injuring the continuous membrane. When there is an additional vascularity of the cornea, with consequent opacity of the conjunctival covering, "a section of the membrane should be made at one line's distance from the margin of the cornea." In aggravated cases the operation requires to be repeated.

"After the excision of the granulations and the division of the conjunctiva, a solution of the sulphate of copper, or some astringent, is very advantageously employed in the way of injection. A few drops of the liq. plumb. sub-acetatis, or the tinct. opii vinos, are often highly effective." 272.

The lunar caustic is often useful in preventing the regeneration of the granulations. In cases of fungous protrusions or flap-like elongations of the conjunctiva, the treatment consists simply in the excision of the tumours, which is most conveniently done with a lancet-shaped knife, cutting on both sides. The same treatment is applicable to pannus, the elongated valvula semilunaris, and the caruncular excrescences which sometimes form in clusters between the tarsus and globe.

5. *Pterygium.* The fleshy pterygium is sometimes a chronic or stationary disease, producing little inconvenience, and not interfering with vision. In such cases Mr. Travers advises its being let alone.

"When, by its progress, it is encroaching upon the sight, it should be raised by dissection as close as possible to the margin of the cornea, and the relaxed portion of the membrane removed by an incision midway between the base of the pterygium and the cornea, and concentric to that membrane." 274.

In this operation Mr. Travers prefers the cornea knife to the scissors. It is inadmissible to meddle with any portion of pterygium that may have encroached upon the cornea. The tendency to reproduction may be checked by the application of the caustic pencil to the section of the tumour.

"The treatment of the membranous pterygium consists in nipping up a crescentic portion of the opaque membrane as near as convenient to the cornea, and freely excising it with a pair of curved scissors. The extremities of the line of excision both in this and the former species should extend beyond the diseased part." 275.

Diseases of the Cornea. The lamellæ of horny substance in the cornea have no vessels proper to themselves, but derive them from the covering and connecting cellular tissues. It is rare to see red vessels in the interlamellar texture of the cornea; but deposits of adhesive matter and pus are frequent. The cornea is also rendered turbid by congestion in the vessels of its covering or connecting texture—and thus may be said inflamed. The cornea, presenting an onyx of adhesive matter, and being thus rendered opaque, indicates strongly the practice for reducing inflammation.

6. The *superficial ulcer* is commonly attended with much inflammation of the conjunctiva, and, by continuance, of the sclerotica. The pain is often spasmodic, and relieved by profuse lacrymation at intervals. Opium should be so combined as to operate on the skin, and the bowels must be kept freely open. Touching the ulcer with solution of arg. nit. is the best local treatment. Warm fomentations afford temporary relief. "It will be found advantageous, if not indispensable, to prevent relapse, to affect the system with mercury, where the inflammation of the sclerotica is intense."

"The indolent and the deep sloughing ulcer may be touched once or oftener with the caustic pencil, or washed once a day, or oftener, with the solution. The cleansing of the ulcer and the opaque adhesive circle is the sign for a less frequent use of it, and the deposition of new matter, undergoing a vascular organization, renders its further use hazardous. The occasional use of leeches is often a necessary accompaniment to this treatment. The administration of tonics and sedatives is at the same time essential." 279.

7. When the *hypopion* rises towards the pupil, and the ulceration of the cornea is extending, Mr. Travers advises its discharge by a section near its margin. The *procidentia iridis* from ulcer. if small, should be touched with a fine point of caustic—if large and extending, it may be snipped off with a pair of curved scissors, and the caustic pencil applied. The chronic interstitial ulcer requires only stimulant and astringent injections, with blisters, bark, opium, good air, and attention to the chylopoetics.

8. Upon *strumous nebula of the cornea*, Mr. Travers makes some excellent observations, especially respecting the employment of mercury in this and other affections of the eye. No form of recent opacity is so intractable as this. The hydrargyrum cum creta, or the oxymuriate, in small doses, will sometimes succeed better than other forms, and the combination of calomel with antimony better than with opium. Mercurial frictions, in constitutions which evince an insusceptibility to mercury internally, should be employed; and when once it is decided that the mercurial action should be set up, nothing but the clearest demonstration of the patient's inability to support it, should interfere with the full and fair execution of the plan.

"A character notoriously abused by indiscriminate excess, is in much danger of being further injured by half measures. This I think has been the case of mercury. It is not the most delicate

frame which is most ready to admit or best able to support it; and it is not the quantity consumed, but the quantity absorbed, which is to be taken into account by the practitioner. The progress of disease during its exhibition is no argument against its continued employment; in this view, unless the system be fairly under its influence, all that has been given goes for nothing; nay, I have had occasion to see many cases in which, after all the signs of absorption were manifest, its operation upon the disease was for a time unobserved, or was null, and was yet ultimately all that could be wished." 284.

On the other hand, an alarming degree of arterial excitement, or certain morbid appearances of the organ, not looked for in the natural and ordinary course of the disease, would determine the practitioner to suspend the medicine.

9. *Staphyloma*, if purely corneal, producing deformity or irritation and inflammation, should be excised. "The ligature passed through and including two-thirds of the diseased cornea, by means of a curved needle, assists the operation by steadying the globe. If the staphyloma be from dilatation, the iris will be left—if from breach, it is compacted, and removed with the cornea.

10. In the *conical cornea*, the discharge of the aqueous humour is useless, and so are all applications to arrest the disease. Mr. Travers has found repeated blisters, and the more powerful tonics, as steel or arsenic, decidedly serviceable. To these may be added cold bathing, and the practice of opening the eyes in cold spring water. The tubular spectacle frame with a pupillar aperture affords more aid in correcting the vision, than any form of lens.

11. *Sclerotitis.* Our readers will remember that the symptomatology of the diseases, now under consideration, has been laid down in our preceding number, and that number should be constantly referred to, while consulting this article, which confines itself to therapeutics. Sclerotitis is rarely a primary disease. It is by no means so decidedly influenced by mercury as the iritis. The subjects of it are usually reduced and irritable in a high degree, from suffering with rheumatic inflammation in the elbow, knee, or ankle-joint.

"Though it is necessary to use mercury with more reserve than in other forms of inflammation, to suspend its operation at intervals, and allow the system to recover from its immediate effects, yet exhibition will be found, in the majority of cases, indispensable. The rude and profuse employment of it hurries on the disease, and the extension of the inflammation to the interior tunics ultimately

destroys the organ. The nitric acid may often be exhibited with marked benefit, in the intervals of the mercurial action." 289.

The oxymur. hydr. in doses of an eighth to a twelfth of a grain, or five grains of the hyd. c. creta, are most valuable and beneficial in these cases. The Dover's powder, conium, henbane, and extract of sarsaparilla, either dissolved in decoction, or taken freely in the solid form, are useful auxiliaries.

On the subject of choroid and iritic inflammation, Mr. Travers's sentiments are well known, both through the medium of his own works, and the former series of this Journal.

"One full blood-letting or more should be premised in the acute stage of the disease; and topical blood-lettings during the exhibition of it, are generally required at short intervals. I have now and then found, that the incipient inflammation, where it has extended from the conjunctiva, yields to a copious venesection, and two or three brisk doses of calomel and rhubarb, followed up by the infusion of senna; but, generally speaking, the system must be made to feel the influence of mercury before the disease is permanently subdued. The inflammation which has proceeded to the effusion of adhesive matter, never, in my experience, yields either to the lancet, continued nausea, or full purging; and it is remarkable that the cases presenting this termination of inflammation are always most sensibly and immediately benefited by the remedy in question, whether the cornea or the iris be affected, or any other texture of the body." 291.

After some remarks on the action of mercury in different constitutions, our author closes this section with the following important observations.

"But if any two facts are well established in modern medicine, I apprehend they are these:—first, the power of mercury to arrest acute membranous inflammation, both prior to, and after the effusion of adhesive matter; and secondly, its power rapidly to remove, by an excitement of the absorbing system peculiar to itself, the newly effused adhesive matter. If these facts are admitted, then the propriety of its use is indicated in iritis, as in carditis, pleuritis, peritonitis, and the only practical question that can arise respecting it is how far the patient's strength is equal to support the remedy. There are, I admit, states of the organ as well as of the constitution in which it cannot be borne, and no sooner is its influence felt, than the inflammation threatens disorganization, and if the plan is persevered in, quickly runs on to it. The globe becomes enlarged or misshapen, the sclerotica assumes a livid hue, and the veins a state of varicose congestion; sometimes the eyeball suppurates, and the little remaining vision is completely extinguished. In cases where age, or the existence of other diseases, or the already excessive use of mercury, has greatly enfeebled the powers of the system, it must be used, if ventured upon at all, very sparingly, or

with intermissions, and the system must be supported by every admissible means, both of nourishment and medicine, during its employment." 292.

12. *Amaurosis.* This comprehends both functional and organic derangement of the *sentient* system of the eye, impeding vision. The symptomatology and pathology of amaurosis will be found in page 116 *et. seq.* of our last number. The functional amaurosis is a very diversified class of disease, and being the effect of some morbid action in the system at large, or some important organ, these last are the proper objects of medical treatment. Thus amaurosis from gastric disorders, plethora, irritation, &c. are remediable; whereas, that from paralysis, the sequel of fever or epilepsy, or severe constitutional disease, is a hopeless form of the malady.

The proper functional amaurosis, if treated at a very early period, is very often cured. The extreme of light or temperature, and the over-exertion of the organ are the chief causes, and the removal of these is obviously necessary to the cure.

"The removal of an irritating or oppressing cause will often effect a sudden and marked relief, as by clearing the intestinal canal of vitiated secretions therein accumulated, by restoring the digestive functions labouring under manifest derangement. or by taking away blood where the necessity is indicated. I have seen an incipient amaurosis distinctly arrested by the extraction of a diseased tooth, when the delay of a similar operation had occasioned gutta serena on the opposite side two years before." 299.

sive similarity often prevails between the signs of diseases, resulting from conditions diametrically opposite. Thus the treatment in cases of general plethora and cerebral compression will be evidently depletive; whereas, in cases of undue determination of blood to the organ, very common after deep-seated chronic inflammation, or distress from over excitement, the vessels have lost their tone—an effect decidedly increased by depletion. Our author has never seen any benefit derived from antispasmodics, nor from the emetic practice, recommended by high authority.

"The cases of gastric disorder to which it is especially applicable are most benefited by a long continued course of the blue pill, with gentle saline purgative and tonic bitters." 304.

After the visceral functions are regulated, by blue pill, colocynth, rhubarb, or aloes, we are to exhibit general tonics, as the mineral acids, bark, steel, (when admissible,) and arsenic.

"When the amaurosis is recent and sudden, and either the signs of an obscure inflammation are present, or only the amplitude and inactivity of the pupil correspond to the patient's history, the indication is less simple; mercury should be introduced with all convenient rapidity into the system, I mean so as to ruffle it in the least possible degree. No advantage is obtained by salivation, on the contrary I think it hurtful; when mercury is beneficial its efficacy is perceived as soon as the mouth is sore. I have seen it tried, and have myself tried it in many cases of perfect amaurosis without the smallest advantage; but in cases of recent occurrence, imperfect, but rapidly progressive from bad to worse, I have been witness to its power in suddenly arresting the disease in too many instances, not to entertain a far higher opinion of it than of any other article of the materia medica." 305.

Entire repose of the organ is necessary, with the natural tonic, viz. a pure, dry air, the cold bath, horse exercise, nutritious diet, early and sufficient rest, agreeable society. "These are of greater avail than drugs."

The 4th section of this chapter is on diseases of the eye-ball. The treatment of injuries from external violence, falls under the head of inflammation, and need not be alluded to here. Neither shall we touch on the operation of extirpating the eye-ball, but confine ourselves principally to what may be considered *medical surgery*, as all those who undertake the higher operations on such a delicate and important organ as the eye, will naturally possess themselves of the original work. The same reasons will induce us to pass over our author's section on artificial pupil entirely, and to

touch on the extensive class of operations for cataract very lightly.

Mr. Travers remarks that it has been customary for oculists, where one eye has been affected with cataract, to advise the postponement of the operation till the other eye becomes dark. This he combats, because the cataractous eye is strongly disposed to become amaurotic on the supervention of accidental inflammation, besides the danger of the retina losing its vigour by the permanent exclusion of light.

"It would be incorrect to say that the operation was unadvisable in all cases of cataract in which the patient has no sense of light, for it is possible that the density of the lens may be such as absolutely to exclude the light, and that the motions of the iris may be therefore suspended, or from some degree of pressure of the lens, or adhesion of the uvea to the capsule, that the pupil may be undilated, and the circumference of the lens permanently covered. But undoubtedly a case of this description is unpromising. A strong sense of light by which at least to know the direction in which it enters the apartment—to be sensible of its falling on the eye, and of a shade, as the hand for example, intercepting it, with a corresponding freedom of motion in the pupil, is the most favourable state for the operation. There is in this case perception enough to determine the sensibility of the retina, and not enough to occasion the unsteadiness of the globe. If a patient has visual the eye is irritable to light, and involuntarily rolls as far as possible towards the nose on the introduction of the instrument, one of the greatest perplexities in the operation." 315.

(1) couching, extraction, and absorption, the first and most ancient, is now seldom practised. It is only applicable to cataracts of firm consistence, and where there are serious impediments to the more eligible mode of extraction.

"The couching needle may be passed through the sclerotica at a line's breadth from the cornea, and a little below the horizontal diameter, so as to avoid the long ciliary artery: or through the inferior part of the cornea and sclera: and the lens may be depressed vertically or horizontally. The term reclination has been applied to the latter method. In both cases the lens must be touched near a breadth of the vitreous humour below the centre of the pupil, the anterior capsule and the capsule of the vitreous humour should be divided or torn through, to ensure the operation effectual. The lens corresponds in diameter to the iris, and there is therefore no sufficient space into which it can be depressed. The posterior capsule, adhering still to the vitreous humour, must be lacerated or divided in its numerous ligamentous and membranous: and if its anterior capsule was not ruptured, it would become a considerable obstacle, and require a subsequent operation." 317.

The operation of couching through the cornea (keratonyxis) possesses, in our author's mind, no advantages over that through the sclerotica, the injurious consequences attending the perforation of the latter and choroid, being either imaginary or resulting from unskilful management.

"The real objection to couching is the ultimate step of the operation, viz. the breaking up of the fine texture that fills the globe by the forcible depression of the lens. Whether it be depressed edgeways or breadthways, makes no difference in the result; it must still occupy a breach in the cells of the vitreous humour, and must derange and disorder that delicate texture and those connected with it. A slow insidious inflammation marked by a gradual development of the symptoms of disorganization, viz. congestion of vessels, turbid humours, flaccid tunics, and palsied iris, is too often the consequence. The sight, instead of improving when the immediate effects of the injury are passed away, remains habitually weak and dim, or declines and fades altogether." 319.

Absorption is only to be attempted where the cataract is flocculent, the perfection of which operation consists in making the free central aperture by laceration of the anterior capsule the preliminary operation. The more minutely the lens is broken up and divided in its texture, and the more its fragments are dissipated in the anterior chamber, the quicker the progress of absorption; and the softer the texture of the lens, the more readily and safely is this object accomplished.

"I pass over the description of an operation which consists in the introduction of a knife, whether through the cornea or sclerotica, for the purpose of cutting up the hard crystalline *in situ*, and throwing the slices into the anterior chamber; and I mention it only by way of caution, if caution be necessary, against a measure so desperate and ill advised." 320.

It is especially to the cataract of infancy, which is fluid or flocculent, that the operation of absorption is applicable. Here indeed there is no alternative, for its consistence does not admit of depression, and the eye is too unsteady to admit of extraction with safety.

"It is impossible to conceive a more simple, sufficient, or gratifying operation than that of Mr. Saunders, if the intention is perfectly executed. I have now enjoyed extensive opportunities of ascertaining its value; having operated, during a period of ten years, upon children of all ages from four months upwards, and I do not hesitate to affirm that it ranks in my estimation as one of the finest discoveries of modern science." 321.

But the operation of extraction is by far the most perfect ever devised for the cure of cataract. It is, however, diffi-

cult; the several modifications suggested at different times, owing their origin to the disappointments and defeats which operators have met with in learning to execute it with success. The Baron de Wenzel confessed that he "spoiled a hatfull of eyes," before he had learnt to extract. The main impediment to the success of the operation, Mr. Travers thinks, is—"a section of insufficient magnitude." The easy extraction of a cataract, like the easy extraction of a stone, almost invariably does well, and the difficult and forcible removal of either as certainly augurs unfavourably. The enlargement of the section, if too short, is difficult, and always dangerous to the iris in the collapsed state of the cornea. It is attended, moreover, with imminent risk of a laceration, from the want of due support, of the vitreous capsule, the loss of a portion of this humour, and the consequent sinking of the lens behind the iris. The free escape of the vitreous humour, from imperfect section, may embarrass the operator, and induce him to leave the cataract, in the hope of its absorption, or of removing it at a future time—an erroneous practice in Mr. Travers's opinion. "For as soon as the wound closes, the cataract is raised by the renewal of the aqueous humour, and pressed forward upon the iris." Our author has seen inflammation speedily supervene, in such cases, terminating in suppuration and destruction of the eye. It is a point of importance, our author thinks, that the section should not be carried so low as to verge upon the sclerotica, and thus leave the corneal margin of an insufficient breadth for union. Mr. Travers prefers the section midway between the pupil and margin of the cornea.

Soft, semi-transparent, and unadhering capsular cataracts may all be conveniently extracted, as they pass through a smaller section, and the capsule is easily laid hold of with a hook or forceps.

In respect to instruments, every man must decide for himself. The knife of Professor Beer of Vienna is that which Mr. T. is in the habit of using. The preparative and after-treatment is of great consequence, in the issue of the operation. Purgatives and abstemious diet should precede; and if there be fulness of the vessels of the head, the patient may be cupped the day before operation. "It is a matter of some importance to examine the section, and adjust it accurately before finally closing the eye." A slight friction of the lids assists the pupil to recover its figure, and dissipates any small floating particle of lens. The sitting posture, in an easy chair, is most favourable after the operation, until the patient feels fatigued, and desires to go to bed. Confinement to the latter produces great restlessness.

If the patient complains of pain on the evening of the day of operation, a full blood-letting removes it, and should not be omitted. Mr. T. never gives any opiates. A light bandage passed round the night-cap is sufficient covering for the eyes. Compresses are better omitted. For the inflammation that may succeed the operation, topical blood-letting and blisters are sometimes necessary; but a strict antiphlogistic regimen is always proper. "There is often an irritability to light, an aversion to open the eye, which is removed by two or three brisk doses of calomel."

"The inflammation of the iris, the interstitial ulceration and opacity of the cornea, the separation of the edges of the section by the intervention of another texture, the redundant deposit of lymph in the section, or the ulceration of its edges, are the mischiefs which occur after unfavourable extractions. Blood shed by a wound of the iris in the anterior chamber is quickly absorbed. Where it has even filled the entire chamber, I have found the aqueous humour clear on the succeeding day.

"The coalition of the iris and cornea adjoining the section is the result of a prolapsus or a lesion of the iris. The iritis may be vehement and proceed to amaurosis, or it may terminate favourably under the action of mercury, in constricted pupil. The dimness of the cornea, if any, is slight and transient, except an interstitial herpetic ulcerative action, connected with a bad condition of the edges of the section be present, when the cornea takes on an opacity of a very intractable kind. The sclerotica is in this case inflamed, and very minute depressions appear on the surface of the cornea, which undergoes a total loss of brilliancy, although it remains obscurely transparent. The restoration of smoothness to the surface does not diminish the lacklustre appearance of the membrane. The patient has a perception of light, but no vision of objects. In fact, the cornea precisely resembles that of the dead subject. Mercury is of uncertain efficacy in this case, which fortunately is very rare. Time and tonics do most for it." 331.

We shall pass over the important chapter on the various operations for artificial pupil, because we cannot give a satisfactory analysis of it, and because the work will be in the hands of all surgeons who practise such delicate operations on the eye. We shall therefore, in the remainder of this article, which must soon come to a close, advert only to minor points of ophthalmic surgery, as being more generally attended to by practitioners of all ranks. The last chapter is on diseases of the appendages of the eye.

Hordeolum. This should be discharged with the point of a lancet, and poulticed or bathed with a slightly astringent wash. The redness of the tarsi, thickenings of the con-

junctiva, and small cuticular denudations that result from frequent formations of stye should be treated with dilute nitrated ointment of mercury, and alum or zinc washes.

Lippitudo. The acute form generally yields to a single stimulant application; but the chronic lippitudo is a very deforming disease, and often intractable.

"The vessels of the palpebral conjunctiva are turgid, and at length varicose, the membrane a little overlaps the thickened tarsal border; this is partially if not quite denuded of cilia, and small surfaces of the adjoining cutis are excoriated. The follicles are plugged, and here and there is one so much distended by inspissated mucus, as to occasion acute inflammation. These should be opened with the point of the lancet, and the white consolidated secretion removed, the conjunctiva should be occasionally scarified, and the meibomian borders stimulated by one of the ointments above-named. The tarsal edges should also be frequently bathed with an astringent lotion. In the aggravated and obstinate cases of lippitudo, where the conjunctiva is altered in its texture, the sulphate of copper lightly carried over the thickened conjunctiva and ulcerated border of the tarsus, is highly useful; and stimulant solutions of copper, zinc, lunar caustic, or sublimate, applied by a camel-hair brush to the tarsal edges before smearing them with the ointment, are likewise advantageous." 352.

At the risk of being accused of heterodoxy, Mr. Travers asserts that the "golden ointment" is an excellent remedy, and "that the inventor of this arcanum deserves well of his country." The great evil, of course, consists in the *abuse* of quack, as of other medicines.

"In proof of this remark, I may observe that nearly all the schemes hitherto suggested have been executed within my knowledge by different surgeons, viz. the small probe and injecting syringe of Anel, the sound and syringe for the nasal duct, the seton of silk or catgut, the bougie or nail-headed style, the metallic tube, &c. In Paris, M. Dubois employs the silk seton of Mejan, M. Dupuytren the permanent tube of Wathen, M. Roux the mesh seton introduced by means of a watch-spring from the sac. M. Beer, of Vienna, uses for a seton, a coil of catgut, such as is used for fiddle-strings. Among the surgeons of this town, Mr. Ware's style is chiefly in use, although the practice is evidently losing credit." 359.

Mr. Travers thinks that the effect of a severe cold in the head, producing a coryza and a troublesome watering of the eye, may enable us to form a pretty accurate idea of the cause of a permanent stillicidium. A state of vascular congestion and intumescence, if long continued, may lead to permanent thickening of the membrane lining the duct, and thus occasion a stricture of its calibre. An adhesive process, whether primary or consecutive to the states of suppuration and ulceration, finally closes the duct, and renders it impervious. "The obliteration of the canal by a degeneration of the membrane into a texture resembling cartilage, is a secondary morbid change, and only the result of long continued obstruction." Abscess, though often the consequence of obstruction in the duct, may take place totally independent of obstruction, though causing a temporary one. A free opening of the sac, for the purpose of discharging its contents, shortens the sufferings of the patient, and saves the skin; but unless previous symptoms demonstrate stricture, the abscess does not warrant the employment of any farther measures.

Mr. Travers's practice, in cases of lacrymal obstruction, is simply the passing a moderate sized probe into the nose, after the incision of the sac, and then reducing the inflammation of the parts.

"A set of silver probes, of about five inches long, varying in size, flattened at one end, and slightly bulbous at the point, are the instruments I use for the purpose of restoring the passage. The probe is introduced with perfect facility by one who is familiarly acquainted with the anatomy of the part, from either of the puncta lacrymalia, into the corresponding nostril, where no obstruction is offered to its passage. If the punctum be constricted, it is readily entered and dilated by a common pin; and upon withdrawing it, by one of the smaller probes: the direction and relative situation of the lacrymal ducts, the sac, and the nasal canal, point out the proper course of the instrument. It is confirmed by its advance without the employment of force, and the sensation conveyed by the

free and unencumbered motion of its point; until the point is fairly within the sac, it is necessary to keep the eyelid gently stretched and slightly everted; the upper lid being drawn a little upward toward the brow, the lower as much downward toward the zygoma. The point carried home to the sac and touching lightly its nasal side, the lids may be left at liberty, while a half circular motion is performed by the instrument; the surgeon neither suffering the point to recede, or on the other hand, allowing it to become entangled in the membrane."

"The probe now rests in a perpendicular direction upon the eyebrow towards its inner angle, and in this direction it is to be gently depressed until it strikes upon the floor of the nostril, where its presence is readily ascertained by a common probe, passed beneath the inferior turbinated bone. The probe of smallest dimensions is of sufficient firmness to preserve its figure in its passage through the healthy duct, but it is too flexible to oppose any considerable obstruction, without danger of a change of figure; for the stricture of the lacrymal ducts it is of sufficient strength." 374.

By several repetitions of the operation, the passage is generally rendered permanent; but should this not be the case, Mr. T. introduces a style having a small flat head, a little sloped, through the punctum lacrymale into the nose, and leaves it for twenty-four hours in the duct. If worn longer, it ulcerates the orifice. A day or two should be suffered to elapse before the style is again introduced, and it should then be passed through the other lacrymal duct. The introduction of tepid water should be made on the intermediate days, by means of Anel's syringe.

We have now, we hope, exhibited as full and comprehensive a view of Mr. Travers's work, as could well be effected within the limits which the article has occupied. The apparently continuous chain of the narrative, may induce a supposition that little art or labour was necessary in the construction of the analysis. Let those who think so, try to imitate it, and they will then feel the difficulty. Mr. Travers's work is so pregnant with sterling information, that we often found it a hard task to compress valuable matter within less bounds than those which it occupied in the original—a rare circumstance in modern publications!

In every part of Mr. Travers's work, there is such forcible indication of good sense and sound judgment, that our assent to his propositions is almost irresistibly secured—and that, apparently without the least effort on his part. Such powers are the lot of few; and we sincerely wish that the excellent author may long enjoy them, for the good of humanity, and the honour of the profession.

The plates are executed in the very best style.

XI.

The principles of Forensic Medicine, systematically arranged, and applied to British Practice. By JOHN GORDON SMITH, M.D. Octavo, pp. 503. London, 1821.

As one of the great objects of legislation is the protection of human life against open violence or secret assault, so the perpetration of these acts is solemnly and severely punished, not in revenge for what is past, but as a security for the future. It is upon these melancholy occasions that medicine comes in contact with jurisprudence; though so widely separated, in general, that Blackstone considered it unnecessary for the members of the medical profession to have any knowledge of legal matters, since they are exempt from the burthen of public service, to which others are liable. As far as our *professional* character is concerned, we are perfectly of Judge Blackstone's opinion; for, in medical jurisprudence, the physician has nothing to do with the *law* of the case, but only to elucidate the *physical* circumstances, leaving all moral deductions and judicial reasonings or sentences to the constituted authorities. We cannot agree with M. Foderee, therefore, in the following sentiments:—"Beaucoup de bons praticiens," says he, "sont embarrassés quand ils sont appelés par la medicine judiciaire; *il faut connaitre les lois de son pays, les formes usitées dans les tribunaux, les termes dans lesquels un rapport doit etre concu, suivant la disposition des lois, &c.*" Why this would be making lawyers of physicians. We really see no necessity for any *legal* knowledge in these cases. We are not examined on points of law, but on points of physiology and pathology—subjects quite comprehensive enough in themselves, Heaven knows! But then, to give this physical evidence with propriety or any thing like certainty, we must not trust to the resources of *general* professional knowledge; we must make ourselves acquainted with the relations which physiological and pathological principles bear to the facts judicially investigated—in short, we must now study FORENSIC MEDICINE, or subject ourselves to the risk of exposure in a court of justice, and consequent forfeiture of character, although perfectly qualified in our profession for all common and practical purposes, at the bed-side of sickness. This is a tax imposed upon us by the progress of civilization, the diffusion of human knowledge, and the march of science. We must submit to it, not merely with resignation, but encounter it

with zeal, so as to discharge the duty with honour to ourselves and justice to the public.

But, when properly viewed, the study of forensic medicine should not be considered a hardship, nor will it be found unprofitable, even were we never to be called upon in judicial proceedings. What is it but an attentive investigation of certain physiological and pathological points which, as they do not cross our path every day in the common routine of practice, are therefore comparatively neglected, till we are accidentally roused to a sense of their importance, by some event that makes a demand on our information, for which we are not quite prepared.

The importance of this study must rise in our estimation, when we reflect that not only are our own characters at stake, but often the characters and lives of our fellow-creatures. We agree with M. Fodéré that the medical practitioner should not only be possessed of Medico-legal knowledge, but that he should be distinguished for probity and disinterestedness, since he occasionally holds in his hands the destiny of individuals, and the peace and honour of families, while his decisions guide the magistrate in the punishment of crime, and rescue innocence from unmerited reproach.

Our readers are all aware that, till very lately, forensic medicine was little studied in this country, and the publications on this extensive subject but few in number, and on very limited scales. The work before us is not only more comprehensive in its plan, but more complete in its execution, than any of its predecessors in the English language; and Dr. Smith deserves well of his brethren for collecting so many valuable materials, in forensic medicine, and arranging them for ready application to the exigencies of life. "In pursuing my task," says he, "I have endeavoured to gather useful information from sources where it was unexpected, as well as quarters where it had been forgotten; and many facts applied to the elucidation of these principles have been literally *found* in the chaos of recorded occurrences." We shall now proceed, without further preface, to present the reader with such notices and specimens of Dr. Smith's work, as the great variety of subjects in the volume and the narrow limits of our journal will permit.

Our author has arranged (with a modest apology for the imperfection of the arrangement) Forensic Medicine into four distinct classes.

"I. Those which regard the extinction of human life: particularly by unusual or violent means. Such are many kinds of sudden death, and all cases of homicide.

"II. Injuries done to the person, not leading to the extinction of life. Such are disfiguring and maiming; causing diseases; the violation of females, &c.

"III. Circumstances connected with the physical system, that disqualify for the discharge of civil offices, or the exercise of social functions. Such are mental alienation, the existence of certain diseases, the want of certain organs, &c.

"IV. Whatever regards the preservation of the public health; as the proper regulations in times of public sickness, the administration of public institutions for the cure of diseases, public nuisances, and many subjects of the last importance, forming that conspicuous department, termed *Medical Police.*" 13.

Of the *last* class he does not treat at all, in the present publication; and it is to the *first* that he has paid the greatest attention, as the most important in its nature, and frequency of occurrence. The *first* class is again divided into four sections; namely, sudden death in the healthy state—death by personal agency, homicide—death by spontaneous agency, suicide—and infanticide.

I. *Sudden death in Health.* Dr. Smith prefaces this section with many judicious observations on the phenomena of death, the certainty of this event, and those states of the living body that resemble death. It is difficult to say what *is* death, except by terming it the cessation of life—that is, a cessation of the functions of life, as respiration, circulation, sensibility—followed, after a certain time, by decomposition. But in cases of suspended animation, as in asphyxia, from hanging, drowning, inhalation of noxious gases, and some diseases, there is complete suspension of the functions characteristic of life. Here the mere examination of the body cannot be trusted to. We must inquire into the nature and duration of the causes, as *they* will greatly assist our judgment in the forensic question of death.

Dr. Smith, after making all necessary allowances for popular credulity, has no doubt but that premature interment has sometimes taken place. He states that he himself was an eye-witness of an instance on the Continent, where a poor woman "was solemnly ushured to the margin of the grave, in broad day, and whose interment would have deliberately taken place, but for the interposition of bystanders."

In the *second* chapter on sudden death, our author makes various judicious remarks on coroner's inquests, and the duties which medical men are called upon to perform on these occasions. To show the necessity of dissection in

all doubtful cases, our author presents several illustrations, of which we shall here quote an example.

"A person may be carried off by apoplexy, under circumstances calculated to excite suspicion either as to the conduct of the deceased himself, or that of others, and to throw a mystery over the event, which a judicious examination may entirely remove. For instance, the usual turgidity and discolouration about the countenance may be wanting, while wounds and bruises appear in various parts of the body, and all this, upon careful examination, may admit of easy and natural explanation. A man may be overtaken with an apoplectic paroxysm in a place where there are hard or sharp objects, upon which he falls, as against furniture in a room, or among stones out of doors; he may thus receive wounds that appear extensive, and may lose a considerable quantity of blood. This would be ample cause for the popular alarm and clamour, by which the scientific practitioner is fully aware that he never ought to be swayed. On dissection the real cause of death will appear, which, together with the extent and nature of the wounds, will show that death has not been produced by external violence. A still more complicated case however may occur. It is possible that a person in the apoplectic state may fall alive into water, and be taken out dead. In such a case we may expect that the signs of apoplexy will be manifest; and circumstantial considerations must have weight; such as the place in which the deceased was found; the appearance of the ground on the margin of the water; the previous state of his mind, health, and general circumstances; as also the degree in which the phenomena of death by submersion exist; of which mention will be made in the proper place. It is to be understood that I am talking of *Apoplexia Sanguinea*.

"Let us suppose another case, one that perhaps may never occur, but which, however extreme, is possible. A person may fall from a height in a fit of apoplexy, or in any other paroxysm that deprives him of the perception of danger and the power of avoiding it. In consequence of this, his skull is fractured, and he is found dead. It can hardly be supposed that the manner in which the fracture has been inflicted can remain a mystery; it will be seen, from the situation of the body relative to surrounding objects, that it has happened by a fall; but three questions may arise. Has the deceased accidentally come by his death in this way? Or has he sought it of his own accord? Or has he been precipitated by the agency of other persons? Between the questions of *mere* accident, and that of suicide, other persons may, perhaps, be as able to decide as ourselves; for dissection may discover nothing but the fractured skull and its consequences. Previous history must here be considered; but it may be, that on opening the cranium, evident marks of apoplexy are found, and further inquiry may lead to the conclusion that the deceased was seized with a paroxysm of this disorder in a dangerous situation, by which he received the fall in question."

The author, after some pertinent remarks on the morbid

appearances in apoplexy, and the various phenomena that indicate a predisposition to that disease, proceed to lay down an outline of the medical practitioner's conduct where a person is found lying dead, and no one is forthcoming to give any information on the subject. For these instructions we refer to the work, page 40 *et seq.* What is said of the medico-legal relations of apoplexy will apply to other causes of sudden death, *mutatis mutandis*, as epilepsy, &c.

Passing over a great mass of elementary forensic matters, from page 40 to page 65, we come to an important chapter on poisoning. The deleterious substances employed for this purpose are classed by our author rather according to the kingdoms of nature whence they are procured, than according to their action on the living animal system.

"For it is not so much with the symptoms and derangements caused by poisons, that our business lies, as with the mode of detecting their presence, or at least of ascertaining the fact of their having been administered; for which purpose, though symptoms may be useful, they are no more than auxiliaries." 66.

Still the qualities of poisons, as corrosive, astringent, acrid, narcotic, &c. are not to be overlooked, as they assist us in forming an opinion as to the fact of poison having been administered. The following extracts, as containing interesting matter in themselves, will also afford specimens of our author's manner.

"The general symptoms that ensue when a person has taken corrosive poison, are violent pain and sense of heat in the stomach and intestines, accompanied with constriction of the mouth and fauces—frequent vomitings, often of blood, followed by bloody diarrhœa, and occasionally attended with hiccup and tenesmus. The pulse is quick, small, and hard, becoming at length imperceptible. The body becomes very cold, and suffused with cold moisture—though these symptoms vary; there being sometimes intense heat, accompanied with inextinguishable thirst. Some poisons of this class produce priapism. There is generally great anxiety and oppression at the præcordia, and fœtor of the breath. In the mean time gangrene is rapidly advancing within, although the production of this state of the parts is not required to bring on the fatal result. The countenance becomes altered and convulsed; while the internal senses remain unimpaired." 69.

The following passage forms a proper sequel to the above.

"On examining the bodies of those who have died in this manner, the following appearances have generally presented themselves. Externally they have been found livid, with more or less

of a distorted appearance about the countenance. On laying them open from the fauces downwards, the specific and immediate effect of these poisons can generally be traced. The parts over which they have passed will be found more or less excoriated, if the texture be not destroyed. In the stomach and neighbouring intestines there are generally traces of the most violent inflammation, indicated by destruction of the villous coat, and even extending to gangrenous spots and eschars—nay, frequently to absolute perforations. In various parts of the intestinal canal, constrictions also are found.

"Separation of the coats of the intestines likewise takes place; this circumstance has been considered conclusive. But cases on record, in which detachment of the villous coat of the stomach and intestines has taken place, without the slightest ground to suspect the administration of poison." 70.

Our author enters fully into the important subject of poisoning by arsenic, because the directions and precautions will apply, with trifling modification, to poisoning by most other mineral substances. We can only glance at a few particulars in this section of the work.

In the event of our being called to a person supposed to be poisoned, but yet alive, we should endeavour quickly to get at the remainder, if any, of the substance swallowed, and test it with such things as are nearest at hand—as lime water, or lunar caustic. If the person have vomited, we should preseve the matters ejected from the stomach for the same purpose. The symptoms and the exhibition of antidotes will strengthen our conclusions. If the individual dies, we must proceed to a more accurate investigation. The following extract will show our author's manner of treating his subject.

"The trunk of the body is to be carefully laid open from the top of the thorax to the cavity of the pelvis, taking every precaution to wound no part of the alimentary canal. This being done, let the whole of the intestines be removed; which is to be accomplished by careful separation from their attachments; one ligature being securely placed on the upper part of the œsophagus, a second on the lower part of the intestinum rectum, and a third on the vessels that pass between the duodenum and the liver, whereby every possible precaution will be taken to guard the contents from escape. If we discover preternatural perforations in the stomach or elsewhere, ligatures (even if practicable) might be improper; we must endeavour to avoid the loss of substance through them, by attending to the position in which they are maintained during the process of dissection, and clean sponges may be applied, partly to prevent, as much as possible, the fluid from spilling, and also to absorb and preserve what portion of it does make its way through.

"While this is going on, a large earthen vessel, of a capacity suf-

ficient to receive the viscera, should be prepared—perfectly clean and dry—to which the whole intestinal canal is to be transferred.

"Other vessels of the same kind, though not necessarily of equal dimensions, are also to be got ready. The canal being laid open throughout its whole extent, the fluid contents are to be placed in one vessel, and the solid in another. The intestines are then to be washed in distilled water, and the product of this is also to be carefully set apart. These precautionary steps being taken, we proceed to search accurately for lesions of structure, and morbid appearances; and whatever may be discovered in this way should be correctly noted down. Eschars, gangrenous inflamed and perforated spots, Orfila recommends to be removed with a portion of the parts around them, and placed in alcohol.

"The preliminary preparations for a chymical examination having been arranged, we now proceed to analyze the various substances obtained. In the first place we must search for solid particles of the arsenious acid, and if we find any, let them be tried in the various ways already described. If our search for them be unavailing, our attention must then be directed to the contents of the alimentary canal in general; and it will be a convenient rule to keep those of the stomach separate from the rest.

"Our author directs that the solid part of the contents should be boiled in ten or twelve times its weight of distilled water, for one hour, renewing the water as fast as it flies off in vapour. This liquor is to be cooled, and decanted from the residue before the tests be applied. But as the degree of solubility of arsenious acid in water at the boiling point is stated by Orfila himself to be as one part to fifteen of water, I should think that the success of the experiment would be better ensured, were the quantity of water greater than here recommended, even although the proportion of arsenic contained in the mass to be boiled, should be very small.

"The tests being applied, should they produce precipitates according to the description already given, these are to be dried, and proceeded with in the established manner of obtaining metallic arsenic.

"If the liquor, however, should offer no indications of poison in this way, we are not to rest satisfied. Orfila then directs that the mass should be *exhausted* by water, treated with caustic potass, and nitric acid gradually added, until it assumes a clear yellow colour. The excess of acid being then saturated with potass, if there be any arsenious acid present, it will combine with the potass, forming an arsenite thereof. The most delicate tests* should now be applied to the liquor; and if the precipitates give cause to sus-

* "These are understood to be lime-water, acetate of copper, and muriate of cobalt. If chlorine be employed to remove the effect of colouring matter, the first of these will give a *white* precipitate; the second a *blue*, varying in shade according to the quantity of chlorine employed—and the last a *rose-coloured* precipitate."

pect the presence of arsenious acid, let the hydro-sulphuret of ammonia and a few drops of nitric acid be applied. A yellow sulphuret of arsenic should thus be obtained, which, being first dried on a filter, then mixed with equal parts of potass and charcoal, and exposed to heat in a glass tube, will coat the sides of the tube with metallic arsenic. By breaking the glass thus coated, (if the metal cannot be well taken off) and exposing the fragments to ignition, the characteristic vapour and odour of arsenic will be developed.

"Sulphurets and hydro-sulphurets, though censured by some authors, have been recommended, and are generally esteemed as antidotes, in cases of poisoning by arsenic. Where these have been administered, the poison becomes transformed into a yellow sulphuret of arsenic. Orfila recommends the following process to be observed in such a case. Let the fluid contents of the stomach deposit all the yellow matter insoluble in water. Let this be dried on a filter, and a portion of the residue placed on burning charcoal. A smell of sulphureous acid will arise. Let another portion of the (dried) residue, finely powdered, be washed with an equal bulk of the potass of commerce, be again dried, and exposed to heat in a glass tube. Metallic arsenic will be speedily obtained by sublimation, and sulphate of potass will be formed at the bottom." p. 99.

The farther we have proceeded with Dr. Smith's work, the more we have become convinced that any attempt at analysis will prove abortive, since it is of that elementary and connected nature that defies any such attempt, without disfiguring the publication, or uselessly occupying space with extracts bearing no relation to each other, and consequently not calculated to prove beneficial to author or reader. Moreover, we are of opinion that as the most complete work of the kind in the English language, no medical man who considers it worth while to guard his professional character in a court of justice, will fail to place this Treatise on Forensic Medicine in his study, as a work of genuine merit, authentic reference, and practical application.

We subjoin a tabular view of the contents, posterior to the section on mineral poisons, the extracts introduced above being sufficient specimens of the execution of the whole.

"Sec. ii. Vegetable poisons, p. 147; § iii. Animal poisons, 178; § iv. Occult poisoning, 195.—Chapter II. Suffocation, 202: § i. Noxious inhalation, 204; § ii. Drowning, 206; § iii. Hanging, 216; § iv. Strangling, 223; § v. Smothering, 229.—Chapter III. Wounds and bruises, 233: § i. Wounds, &c. of the head, 243; § ii. Wounds, &c. of the neck, 254; § iii. Wounds, &c. of the thorax, 255; § iv. Wounds, &c. of the abdomen, 261.—Section III. Death by spontaneous agency, or SUICIDE, 269.—Section IV. INFANTICIDE, 289: Chapter I. Criminal Abortion, 290; Chapter II. Infanticide, strictly so called, 308; *Survivorship*, 378.—CLASS II. Questions arising from injuries done to the person, not leading to

the extinction of life, 286.—Sect. I. MUTILATION, 388.—Sect. II. RAPE, 392.—CLASS III. Disqualifications for the discharge of social or civil functions, 402: Section I. Mental disqualifications, 404: Mental Alienation, 405: § i. Mania, 405; § ii. Melancholia, 420; § iii. Fatuitas, 425—Sect. II. Disqualifications strictly physical, 428: Chapter I. Disqualifications for general purposes, 428: Chap. II. Disqualifications for military service, 434; Chap. III. Disqualifications for the matrimonial state, 442: § i. Impotence, 443; § ii. Sterility, 456; § iii. Diseases, 460.—Section III. Pretended disqualifications, 463: Section IV. Miscellaneous questions, 475: Chapter I. Utero-gestation, 475: § i. The phenomena of pregnancy, 476; § ii. The termination and consequence of utero-gestation, 486; § iii. Of the duration of pregnancy, 490; § iv. Supplementary observations, 493.—Chapter II. Sexual Ambiguity, 495.—Chapter III. Personal indentity, 499.

XII.

Observations in Medicine and Surgery. By THOMAS SANDWITH, Surgeon, Beverly.

(Continued from Vol. II. p. 215.)

MR. T. SANDWITH begins his observations with *cases of protracted inflammation of the pericardium.* These are prefaced by some sensible remarks on blood-letting, which operation he thinks ought to be regulated by the nature of the part inflamed. Hence, in clearly marked cases of inflammations of the mucous membranes, he says, that it should be made a rule to bleed the patient while upright, and to make a large orifice; and, when the serous membranes are inflamed, our patients should be bled in the horizontal posture, in order that a large volume of blood may be abstracted, before a disposition to syncope is induced. The latter mode of venesection is applicable to inflammation of the vital organs, and, according to the author, also, to inflammation of the ligamentous coverings of the joints, as in acute rheumatism. Now, with respect to the last mentioned disease, there has existed much difference of opinion respecting the necessity and even propriety of phlebotomy; and we have of late been induced to believe, that acute rheumatism may generally be cured by a judicious diversion of the circulation to the skin, kidneys, or intestines. The membranes, which envelop the vital organs, are not more liable

to a transition of arthrosial* inflammation, when bleeding is avoided, than when it has been employed; and we find that, after the most ample abstractions of blood, fatal migrations of inflammatory action are daily taking place; as from the pleura to the serous coat of the intestines, and from either to the membranes of the brain, &c. and from one kind of structure to another, as from the mucous to the serous surfaces.

In the inflammation of serous membranes Mr. S. prefers a small to a large orifice in the vein, and says that when a cure does not follow the first bleeding, the operation should be repeated every two, four, or six hours, until it does. The quantity of blood to be withdrawn cannot be precisely determined; and Mr. S. thinks that we have no alternative, but to go on bleeding according to the method of Valsalva, until the powers of life are too feeble to support inflammatory action. Two cases of protracted inflammation of the pericardium are brought forward to prove the utility of repeated bleedings, and Mr. S.'s conduct in the treatment of these cases reflects much credit on his judgment and practice. The word *essera*, which occurs in the description of one of the cases, and is more properly written *eshera*, is an obsolete term introduced by Plouquet, signifying summer-rash, or a variety of lichen. The etymology of *jumentous* we are at a loss to discover, except the author derives it from *jumentum*, which is not sufficiently explicit and defined to be used as a descriptive term, applied to the urine.

2. *On the Utility of Blood-letting in bleeding Diseases.* An instance of purpura hæmorrhagica and two of menorrhagia are adduced to evince the striking advantages of venesection in these diseases, which were formerly supposed to arise from debility, and to require an opposite treatment. We met with an obstinate case of hæmorrhagic purpura in a boy, which was cured by calomel and jalap administered every second day in purging doses, and bark and sulphuric acid on the intermediate days. Had his friends consented to bleeding, we have no doubt the disease would have been sooner removed. With respect to menorrhagia, we have always found bleeding the only effectual remedy, where the pulse has been quick. The hæmorrhage in these diseases seems to be a spontaneous, but inadequate effort to terminate an over-excited condition of the vessels; and, like the

* From ἄρθρον, *artus*, or ἄρθρου, articulo; whence arthrosis, which signifies gout and rheumatism, in which sense Mr. Good employs it.

secretions from the serous and mucous membranes, continues until the volume of blood has been reduced, or the balance of the circulation has been restored by exciting some other evacuation.

3. *Passive Congestion of the Lungs.* "There is a disease of the chest in which the right chamber of the heart, the pulmonary artery, and the venous system of the liver, are overcharged. The blood is imperfectly arterialized, and the system is supplied by the left side of the heart imperfectly. The symptoms of this disease are a feeble pulse; a cold, pale, and relaxed skin; painful struggling in the region of the heart, which beats violently, while the pulse at the wrist is weak; shortness of breath, dyspepsia, and occasional syncope. Cordials aggravate this condition of the heart and lungs; and should not be used even when the patient is in a condition resembling syncope. It is pleasing in such circumstances to see a debilitating power, *viz.* the lancet, restore animation." P. 41.

Two short cases, but very instructive ones, follow.

4. *On Erysipelas from the Bites of Leeches.* Two cases are related, in one of which most profuse bleedings from the arm and temporal artery were necessary to subdue the delirium and other symptoms of violent excitement; and the other case, in which less vigorous measures were pursued, terminated in the death of the patient.

5. *On the Pathology of the Mucous Membrane of the Larynx, Trachea, and Bronchia.* The remarks on the inflammations of the larynx, trachea, and bronchia, are very brief, and appear to be introduced with the view of representing the utility of bleeding.

6. *Cases with Dissections.* These are few, but important. The remarks on apoplexy and a case of scirrhus in the pancreas we shall lay before our readers.

"Between inflammation of the brain and apoplexy, provided we take in the whole disease, there is no essential difference. The former seldom confines itself to that nosological description, but appears in various forms, and apoplexy is one of them. The symptoms which constitute pyrexia, have ranked phrenitis with the phlegmasiæ; and if the premonitory symptoms of apoplexy be carefully noted, its exclusion is unaccountable. The occurrence of fever after the fit has been remarked by all observers, and the other symptoms are analogous." 67.

Scirrhous Pancreas is a rare disease, and its early symptoms being found equivocal, it has always been considered

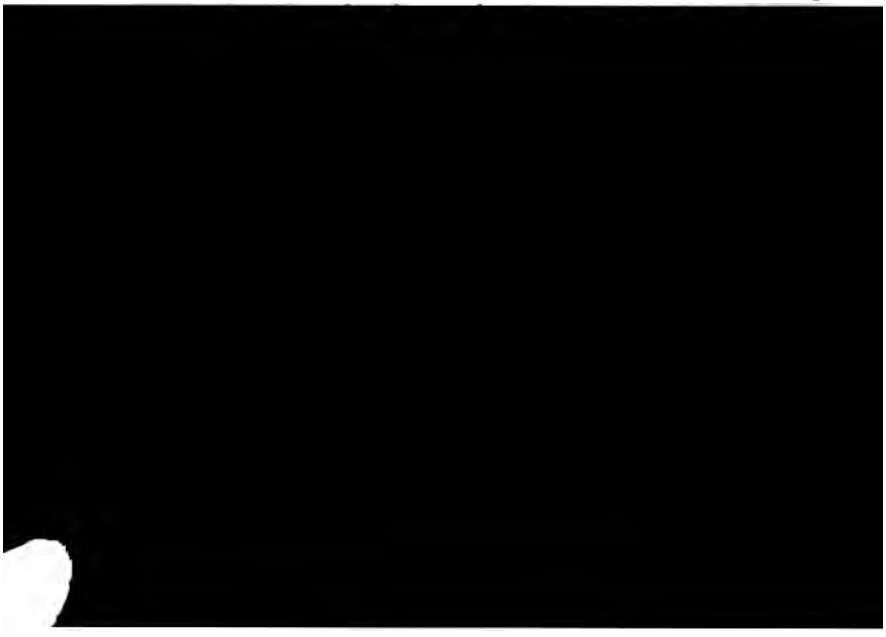
most difficult to detect. Mr. S.'s case and dissection will therefore be acceptable.

"Mrs. C. an unmarried lady, sixty-seven years of age, of a dark complexion, complained of continual pain in the epigastric region, which extended to the left hypochondrium. Deep pressure increased the pain, and there was a remarkable pulsation below the cartilages of the false ribs on the left side. She was a good deal emaciated, but without fever; the bowels were generally costive. Her appetite was bad; but she had no sickness or vomiting. Her complexion was sallow, and her eyes had a peculiar expression of anxiety. The pain was sometimes most intense, and on these occasions she exhibited signs of distraction. Her body was agitated in a most extraordinary manner; she tore the bed clothes, and said she could tear the flesh from her bones. Large doses of laudanum afforded some relief. Six weeks before her death, a vomiting came on. Every thing she swallowed was rejected, and sometimes a little bile and mucus. Nothing appeared to relieve this distressing symptom, and after six weeks of extreme misery she died.

"*Dissection.* The cadaver was extremely emaciated. The spine could be distinctly traced through the parietes of the belly. The stomach was erythematous. The pancreas had the usual marks of scirrhus; and the splenic artery was imbedded in scirrhous matter. A small tubercle was found in the parietes of the uterus, and the germ of a polypus in its cavity. All the other viscera were sound." 90.

II. SURGICAL OBSERVATIONS.

1. *On Contractions in the Neck.* Mr. Sandwith thinks there



The general appearance of the second child was still more formidable than that of the first.

"The face had suffered more; the shoulders almost touched the ears; and the collar-bones were nearly dislocated; in addition to which, a contraction, like a leather thong held the fore-arm at an acute angle with the arm." 101.

"A greater number of vessels were wounded during the operation, and the external jugular veins being massed in the cicatrix, were both divided. The progress of the cure was frequently interrupted by sloughing, and the discharge was excessive. Nevertheless, after five months attention, both to the wound and the constitution of the patient, it was completed.

"Upon the arm the operation described by Mr. Earle was performed, and succeeded admirably." 102.

An operation, which reflects great credit on Mr. S. was performed also on a contracted and diseased mastoid muscle, with success. The contraction followed scarlatina. On the third day intense pain in the wound came on, and the patient was in imminent danger; the functions of the brain and head being disordered. Suppuration however coming on, and a free discharge following, every thing afterward went on well; and by the aid of the collar, a cure was obtained.

2. *On Diseases of the Sublingual and Submaxillary Glands.* The nature and treatment of kamila is well known. The inflammation of the suppurative kind, which attacks the sublingual and submaxillary glands is always tedious, and often alarming. We have seen high fever, delirium, subsultus tendinum, and extensive sloughing of the cellular substance, and of the platysma myoides, as well as the loss of several teeth on the lower jaw, follow this disease, when a timely opening has not been made. Mr. S. most judiciously advises a depending aperture to be made under the chin with the view of draining off the pus, and of preventing it from becoming acrid and offensive, and thus obviating the disagreeable and dangerous consequences we have mentioned. Whenever purulent matter is confined by a fascia, it should always, if possible, be evacuated by an operation, both to prevent the destruction of the adjacent parts and the accession of irritative fever. In proof of the good effect of this practice, Mr. S. adduces two cases, which are highly creditable to himself and his friend Mr. Brereton.

3. *Hydatid Tumours in the Female Mammæ.* The great attention which has of late been directed to morbid anatomy, has enabled us to excel our predecessors in delicacy of dis-

crimination, and in correctness of judgment. To Mr. Abernethy in particular we are indebted for the most scientific classification of tumours, and the most defined notions of their nature and their distinguishing features. This part of modern surgery has also been greatly enriched by the remarks of Sir Astley Cooper. Not only has the science been advanced, but the prospects of the patient improved by these refinements. How consolatory to the patient is it for a skilful surgeon to satisfy her that the ramifications of a supposed cancer are nothing more than the diverticuli or pouches of an hydatid!

"There are tumours of the female breast, which to a superficial observer present the appearance of scirrhus. These contain a fluid, are of a hydatid structure, and are distinguishable from scirrhus by striking characters. In scirrhus the skin has a dull leaden hue; in the hydatid tumour its complexion is natural. A peculiar uneasiness characterizes the hardness of scirrhus, but in the other disease, the tumour is smooth, and there is no more inequality than would naturally arise from the clustering of two or more hydatids. A scirrhous tumour adheres to the skin, and gives it a puckered appearance, but in this disease the skin is smooth." 124.

The above is Mr. S.'s description of hydatids in the female breast; and he adduces two cases, in both which the operation succeeded. One of his patients, however, had to contend with an inflammation in the mucous membrane of the intestines.

3. *Subcutaneous Nævi.* Mr. S. cured this disease in one

two years old was obliterated. This and those which we removed with the knife pulsated violently, but the others which got well after the suppurative process had no pulsation. Those which pulsate are probably aneurisms from anastomosis; while those which are quiescent are the aneurismal varices, and are, we think, seated in the subcutaneous veins.

4. *Case of imperfect Union of a fractured Fore-arm cured by pressure.* This accident occurred to the author, and was cured at the suggestion of Sir A. Cooper, by the application of a piece of saddlers' leather, furnished with straps, in order that the pressure might be increased or diminished, as occasion required. In a few weeks, by this contrivance, the bone was perfectly united.

A few other subjects of minor importance we have omitted for want of room; but this, we trust, will be no disappointment to our readers, who we think will be desirous of seeing the book itself. We are truly happy to find the provincial surgeons display so much professional and literary excellence, as we have had occasion to discover in numerous instances; and it must be gratifying for them to reflect that every day affords them additional opportunities of acquiring the earliest information on every medical subject through the medium of periodical publications, and the liberality of those who fill the highest offices in the profession. Mr. H. and Mr. T. Sandwith have established their reputation both as practitioners and as men of science; and we doubt not they will obtain that extensive patronage and esteem, which they so eminently deserve.

XIII.

A Practical Treatise on the Inflammatory, Organic, and Sympathetic Diseases of the Heart; also, on Malformations of the Heart, Aneurism of the Aorta, Pulsation in Epigastrio, &c. &c. By Henry Reeder, M. D. Member of the Medical and Chirurgical Society of London; and Extraordinary Member of the Royal Medical Society of Edinburgh. London, 8vo. 1821; 276 pages.

For our present improved knowledge of the diseases to which the internal organs are liable, we are principally indebted to the practice of necrotomy, conducted by men

distinguished for their zeal, and animated by a spirit of genuine philosophic research. To this may perhaps be added the modern fashion of writing exclusively on one particular viscus, which, in return for the multiplication of books and the fatigue of perusing them, has certainly contributed to improve our nosologic and therapeutic science. In the present dormant state of medical lexicography,* compilations become necessary; and Dr. Reeder has endeavoured to render the profession a service by collecting the scattered remarks on the different diseases, which form the subjects of his book.

I. *Carditis.* The heart, Dr. R. observes, is liable to inflammation of the acute, sub-acute, and chronic characters, in which the pericardium is commonly more or less involved, and often the lungs. The resemblance of carditis to inflammation of the lungs probably induced Linnéus to omit the former in his arrangement. Dr. R.'s description of the acute form of carditis is similar to that of most nosologists.

The sub-acute form differs chiefly from the acute by the symptoms being more moderate. When it ends in death, the *facies hippocratica* is observable.†

The chronic species of carditis being the most difficult to detect, and having of late excited particular notice, we shall not do justice to the author nor to our readers, without representing his description in his own words.

"Some degree of febrile affection, a small, quick, and irregular pulse; and a peculiar jarring sensation communicated to the hand

head; and, in the more advanced stage of the disease, a pulsation in the epigastric region frequently takes place, and having, in some degree, the appearance as if it arose from a throbbing tumour, and evincing, as will afterward be shown, that the pericardium is then adherent to the heart. Obstinate vomiting is occasionally acceded. At length dropsical affections supervene, as œdema of the face and extremities, and effusion into the cavity of the thorax; the breathing then becomes more difficult and laborious; the countenance assumes an anxious and bloated aspect; delirium not unfrequently comes on; and the patient, after much suffering, of longer or shorter duration, sinks into dissolution." 25.

Cooks and laundresses are, we think, very subject to this complaint, which is generally accompanied with a deadly paleness, yet bloated appearance in the face, and a serous effusion in the cellular substance of the eye-lids.

Carditis is often conjoined with inflammatory affections of some of the other contents of the thorax.

The various morbid appearances, which the heart presents on dissection, have been described by Baillie, Morgagni, Corvisart, Bonetus, and others, and are briefly noticed by the author.

Rheumatic Inflammation of the Heart is the result of metastasis, and is either complete or partial. In the former case the inflammation and pain in the extremities are entirely removed; in the latter they are but little, or not in any degree diminished. When the cardiac affection is mild, a palpitation only without pain is perceptible. The consequence of a long-continued rheumatic affection of the heart is generally an enlargement of that organ: whence violent palpitation, short cough, dispnœa, quick and irregular pulse, hydrothorax, and anasarca, or ascites. The post mortem appearances produced by metastatic carditis are an adhesion of the pericardium to the heart, which, as we have just observed, is generally much enlarged; inflammation or congestion of the membrane lining the cavities; or an inflammatory redness in the cuticular coats of the arteries and veins to a considerable distance. Dr. Reeder has seen this disease succeeded by chorea, which speedily destroyed his patient. In one case of rheumatic carditis, which came under our notice, besides the usual symptoms, there were present profuse perspiration soon after the commencement, with universal tremor of the muscles. By copious bleeding hydrargyri submur. and opium, our patient, an old man, was restored. He had some time afterward a relapse from obstructed perspiration, and died. We found the pericardium adhering to the heart, by means of coagulable lymph,

so closely, that all distinction between the two parts was lost. The heart was white and enlarged, and the pleuræ adherent in several places. We are inclined to believe, that in weak constitutions, in consequence of the metastasis of rheumatism and perhaps of gout, the heart is subject to severe congestion, producing symptoms similar to those of carditis, excepting that acute pain is absent. We met with two cases in one family: one of them, a delicate female, who had suffered many tiresome attacks of acute rheumatism, died with cardiac congestion on the fourth day, without experiencing any urgent pain or manifest reaction; the other, a corpulent but feeble man, was restored by copious bleeding and calomel and opium, acute rheumatism having made its appearance. In the former case bleeding and other active measures were not permitted to be made use of for fear of *debility;* and necrotomy was forbidden.*

Inflammation of the arteries and veins, when it extends to the heart, produces carditis, attended generally with delirium.

Treatment of Carditis. Dr. R. recommends the most vigorous antiphlogistic remedies and regimen, together with blisters, and in the sub-acute and chronic species the employment of mercurial preparations in addition to the other means. Our own experience justifies us in urging the prompt administration of hydrargyri submurias and opium, immediately after bleeding, in the most acute and active species of carditis, as well as in the other forms of the disease.

from derangement in the stomach, when he was fifty years old, and during the last ten years has escaped.

The concretions formed about the heart and large arteries consist of phosphate of lime; and, as those produced by gout are composed of urate of soda, Dr. R. thinks that there can be no affinity between gout and angina pectoris.

Treatment. In the intervals between the paroxysms much may be effected to prevent their accession, by the patient observing proper rules with respect to exercise and diet; and by avoiding exciting causes. Exercise, particularly that of equitation, should not be had recourse to, when the stomach is full. Dr. R. advises his patients to drink water and to eat sparingly; to keep the bowels open; to regulate the temperature of the body by clothing, and to avoid heated rooms and an impure atmosphere. Occasional plethora should be removed by bleeding in the recumbent position, or by cupping, and its recurrence prevented as much as possible by the almost exclusive use of farinaceous food. Issues have been much praised, in the thighs or arms, and we have often made trial of them, as well as of the tartrite of antimony, to excite a pustular eruption; but we have found an occasional blister answer every purpose, with much less inconvenience to the patient.

While the paroxysm is present, Dr. R. advises the abstraction of a few ounces of blood, the patient having been laid in the horizontal position. He has an objection to the use of internal stimuli, unless the heart appear unable, after the lapse of some time, to regain its usual action, when weak wine and water, a small quantity of æther or spirit of ammonia diluted, may be given. One of our patients experiences immediate relief by strong brandy and water. Should not these succeed, Dr. R. would apply a blister over the cardiac region, and immerse the arm, when much affected, in hot water, and afterward direct it to be rubbed with some stimulant and anodyne liniment. Opium may be given with advantage in a protracted paroxysm, and the author observes, that this medicine or the extract of hyoscyamus is the best adapted to prevent nocturnal attacks, when given at bed-time. He repeats that diffusible stimuli are almost totally inadmissible; and should the syncope remain an undue length of time, it will be necessary to transmit electric or galvanic* shocks through the region of the heart, and to inflate the lungs

* We are sorry that we have occasion to repeat our remarks on the inaccuracy and disrespect in writing adjectives derived from proper names with small letters at the beginning; as we find in the word *Galvanic*.—Rev.

by proper bellows, so as to establish an artificial, pulmonary, and aortal circulation.

Twelve cases of angina pectoris, already published in different medical works, are detailed. These were all found to have originated in an ossification of the coronary arteries. Several other cases, proceeding from other causes, are also related; but it seems uncertain whether the coronary arteries were carefully examined in every instance.

3. *On Change in Structure of the Valves of the Heart and large Arteries, and on Morbid Contraction of the different Apertures to which they are attached; also, on Alteration in the Structure of the Muscular Substance of the Heart itself, &c.* Our limits will not allow us to follow the author in his circumstantial account of the various appearances presented by a view of the morbid state of the heart and large vessels. He does not agree with Bichat, who thought that the right auriculo-ventricular and pulmonary arterial apertures, and the right tricuspid and semilunar valves were never subject to organic derangement.

When the valves are enlarged, or the apertures contracted on the left side of the heart, a state of great distress is liable to be induced by any exciting cause.

"Palpitation of the heart is experienced, which is sometimes so considerable, as to be audible to the by-standers, or to shake the thorax, or even the greater part of the body. The pulse at the wrist is hard, quick, irregular, and intermittent, and the length of its intermission varies a good deal, being, in some instances, so long, that two, three, or four strokes ought to have taken place; it is oftentimes very weak, small, and contracted, while the pulsations of the heart are performed, in a violent, irregular, tumultuous, or fluttering manner. In some cases, moreover, two or three strokes of the heart are felt to only one of the radial artery, hence the number of pulsations of the heart, in the course of a minute, exceed greatly those of the pulse at the wrist; and occasionally it is different in one wrist from what it is in the other. Sometimes the heart makes one full stroke against the ribs, and is then followed by two or three indistinct pulsations. On some occasions, when the ear is placed near the chest, a hissing or rustling sort of noise may be heard therein, as of the rushing of water, or as if a fluid were passing through too narrow an orifice; the patient himself is sometimes able to hear this peculiar noise." 150.

Dyspnœa is also present, and the countenance, and sometimes the whole surface, assumes a livid aspect: indicating a general fulness of the venous system. Oppression is felt in the chest, attended with anxiety, and often with pain under the left side of the sternum, extending towards the

spine, or the shoulders, or arms, and producing a sense of numbness in the two last situations. A cough, expectoration, and hæmoptysis, sometimes attend, also a pulsation of the jugular veins, syncope, headach, vertigo, mental irritation, or delirium. The liver becomes sometimes enlarged, and as the disease advances, dropsical effusions follow. The patient at length is destroyed by syncope or by extreme exhaustion.

Enlargement of the valves, or contraction of the apertures in the right side of the heart, produces the same phænomena as we have just stated to follow similar organic lesions in the left; excepting that the dyspnœa is slight, and hæmoptysis is absent.

When the valves permit the reflux of blood, symptoms, similar to those resulting from the organic affections already mentioned, present themselves.

The obstruction which the blood experiences in its return from the head, is apt to occasion apoplexy, paralysis, or epilepsy, and a similar retardation in the reflux of the blood is followed by hæmorrhage from the nose, lungs, intestines, &c. Enlargement of the liver is also produced by the same cause.

Rupture of the Heart has been known to happen where it had not been previously diseased. This accident, however, is generally owing to a morbid tenuity of the walls of the heart, which are unable to resist the pressure against them, occasioned by any great difficulty in the transmission of the blood. The left cavities are more liable to it than the right, and the patient is either instantly or soon destroyed.

Change of Structure in the substance of the heart. The ventricles have been found converted into an osseous or cartilaginous substance, and so indurated as to be incapable of performing their functions. The auricles, being less liable to be affected, acquire an increase of substance and of muscularity, and thus, with the aid of the arteries, carry on the circulation. When the right ventricles are thus diseased, a pulsation in the jugular veins and in the epigastrium is established; and when the left is in the same state, dyspnœa and hæmoptysis present themselves.

Treatment. The several diseases we have just mentioned require the same rules to be observed by the patient, as have been laid down for the treatment of angina pectoris. Very little can be expected from medicine.

Dr. Reeder relates two cases, exhibiting the morbid states to which we have been alluding; also two, which have been published by Mr. Abernethy, and one by Mr. John Hunter.

4. *Enlargement of the Heart, &c.* When this disease is simple and uncomplicated, arising solely from the addition of muscular substance, we have repeatedly seen the best effects result from occasional bleeding and digitalis, as recommended by the author. We have always prescribed the tincture, and gradually augmented the dose, until an effect has been produced on the circulation.

Some of the other varieties of cardiac enlargement are described, and their nature and symptoms explained, with tolerable accuracy. Rules are also laid down to assist our diagnosis. Two cases are appended by the author, and two others transcribed from the writings of Burns and Haller. Our author, however, has shown no very good judgment in the compilation of this part of the work, by passing over several recent writers, particularly continental, on organic diseases of the heart.

We have bestowed on this article a much greater space than we had intended at its commencement; and must therefore conclude with a bare enumeration of the remaining subjects, which form a considerable portion of the book. These subjects are *diminution in the size of the heart, adhesion of the pericardium, polypi in the cavities of the heart, sympathetic affections and malconformations of the heart, hydrops pericardii, aneurism of the thoracic portion of the aorta and pulsation in epigastrio.*

geons, and induced them to say it proceeded from aneurism. It was, however, discovered, as Severinus had foretold, to be occasioned by the action of a carotid artery under a bronchocele. An enlarged and tuberculated liver will produce the external appearance and violent throbbing of a large aneurism in the epigastrium ; and a remarkable case of this kind, accompanied with some interesting observations, has been published by Mr. J. M. Coley, in the Medical and Physical Journal, Vol. xviii. p. 485.

In conclusion, we are sorry to be obliged to remark, that we are not very well satisfied with the present Treatise. We do not observe many marks of personal observation or experience, and in the compilation from others, Dr. Reeder has often neglected to avail himself of the *best* information, while he swells the work with the most *common-place* matter from books in the hands of every one. We need only instance his neglect of the invaluable researches of Laennec on Organic Diseases of the Heart, besides many other very valuable observations and cases published on the Continent. Should the work come to a second edition, Dr. Reeder will do well to attend to these ; and as it is evidently a compilation, there is no excuse for not selecting the best materials from the most authentic sources.

XIV.

Essays on the Female Economy. 1. *On the Periodical Discharge of the Human Female ; with new Views of its Nature, Causes, and Influence on Disease : to which are added, Directions for its Management in the different Stages of Life.* 2. *On a Species of Abortion, not heretofore described, to which delicate Females in High Life are peculiarly liable ; with a Mode of Treatment which has secured a happy Termination of the Pregnancy, where previously repeated Disappointment had been experienced.* By JOHN POWER, M.D. Physician-Accoucheur, &c. Octavo, pp. 101, with a plate. London, 1821.

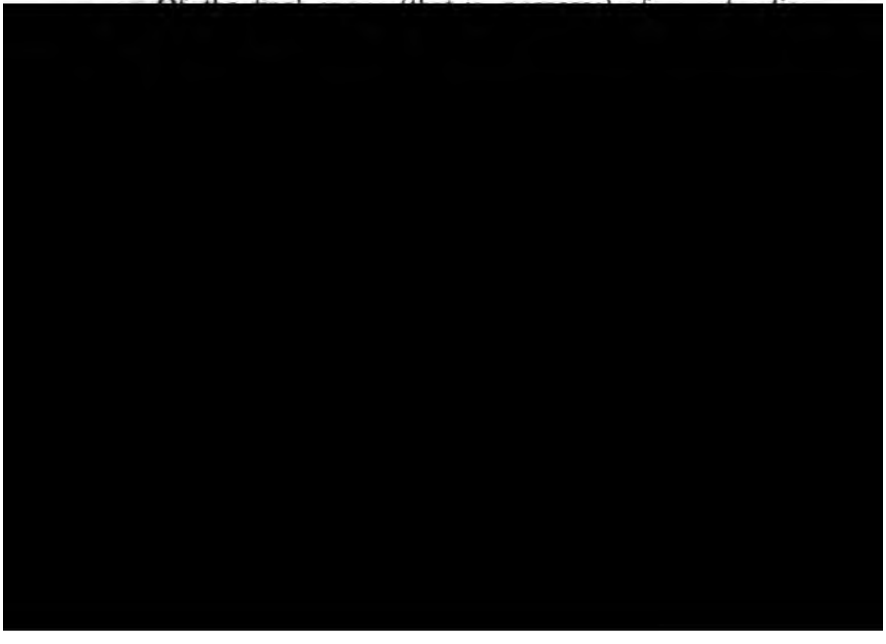
IN the *first* of these Essays, Dr. Power attempts to unfold, upon natural and consistent principles, the nature of the "extraordinary periodical phenomenon which characterizes the human female," and which "has hitherto received no

satisfactory elucidation." In the *second* Essay, his object is to call the attention of the profession to a species of abortion which he is disposed to believe "is now, for the first time pointed out."

"As this affection appears to be of not unfrequent occurrence, and, more particularly incidental to ladies in high life, to whom it may be a matter of the utmost importance to have children, although not exclusively confined to them; and as, when it has once taken place in any individual, it is liable to recur in all future pregnancies, it is hoped that the explanation which is attempted of its nature, and which appears to lead to a successful mode of practice, will not be deemed unacceptable to the profession, or useless to the public at large." Pref. iii.

Dr. Power observes, p. 3, that the *causes* of menstruation have been arranged under two heads—the efficient and *final* causes—the *latter* comprehending the *use* or purpose which it serves in the animal economy. We confess that we cannot conceive how the *use* of a thing can have any thing to do with its *cause*. We can readily imagine that the *use* of an apple is to make a tart and be eaten—but how tartification can be considered in the light of a final *cause* of the apple, we know not.*

It is much more easy to point out error, than to establish truth; and therefore Dr. Power is successful enough in showing that the MOON is not the cause of menstruation—nor redundancy of blood, local or general—nor a ferment in the uterus, as some have supposed.



than some opinions now held orthodox, but which will afford many a hearty laugh to our great grand-children.

It has been the more favourite opinion that menstruation serves to keep the female generative organs in a proper state for procreation. This, we think, is a very rational opinion. But Dr. Power says, if we admit it, "we learn nothing in consequence." This may be the case, and how can we help it? The following passage might startle some sensitive old *maids*, if they were told that menstruation was the *effect* of the *generative process*.

"Nothing has been yet advanced to prove that it may not be a link in the *effects*, rather than the *causes* of the generative process; and, in short, that an improvement might be made upon the axiom, that "women who do not menstruate do not conceive," by substituting the following: a woman menstruates because she does *not* conceive." p. 8.

In short, if we apprehend the true bearing of Dr. Power's theory, it is this:—that were women in a state of nature they would begin to bear children at the period they now begin to menstruate—that during pregnancy and lactation, there would be no menses of course; and that, as soon as lactation was over, they would conceive again, and so on, through a long period of thirty or forty years.

"Were women living in a state of nature, is there not reason to infer that this discharge might be unknown? for supposing, (as that state would operate) that, between the age of 15 and 45, the female was employed in the constant task of renewing her species, one nine months would be employed in producing, and the next nine months in nourishing, her child, so that no time would be left for its occurrence." 11.

Heaven forbid that this state of nature—this "constant *task* of renewing the species," should ever come into vogue in this country; for if it did, New Holland, the Cape, and the plains of the Mississippi, would soon be too narrow for our overflowing population! It is but justice, however, to acknowledge the *fertility* of Dr. Power's imagination, in this new view of menstruation. We confess, indeed, that our author's reasonings are not so clear as to enable us to give any idea of them to our readers; but the following extract appears to contain the result of his theoretical views.

"In proportion as an ovum acquires a state of maturity in the ovarium, the uterus undergoes a correspondent preparation for its reception. Its vascular action is increased in a degree tending to a state of inflammation, and it wants but the additional stimulus of impregnation to determine it to the production of the deciduous se-

cretion so requisite for its proper connexion with the ovum; if, however, the stimulus of impregnation is denied, this increased action is not carried to a sufficient height to produce properly that effect; nevertheless, it is sufficient to give rise to the effusion of a fluid, *which fluid is the menstrual fluid.* The secreting orifices of the uterine vessels being thus determined to an evacuation of their contents, this proceeds until, the ovarian action ceasing, the irritations of the uterine system are relieved, and the *effects* of the increased local action obviated.

"The quantity of fluid discharged during menstruation, and the difference in the qualities of that fluid from the decidua membrane, are not to be regarded as objections to this theory." 19.

The last paragraph in the above passage will give a very good idea of the facility with which authors can reconcile "objections to their theories." And, after all, we cannot help viewing the theory in question, as but a new version of that which ascribed menstruation to a local plethora of the uterine vessels—by which "the irritations of the uterine system are *relieved*, and the effects of *increased local action* obviated." In order, however, to do our author as much justice as our limits will allow, we shall lay before our readers a recapitulation of his theory in his own words.

"We shall now recapitulate, in a summary way, the opinions which have been above advanced.

"As the age of puberty approaches, and long before menstruation is established, the ovarian system of the human female, which had in earlier life laid inert, and almost invisible, begins to develope itself, and experiences that peculiar state of increased action, which determines it to the formation of an ovum, containing the female contribution to the embryo, and a store of nutritious matter for its support in the earlier periods of conception, before its full connexion with the uterus has enabled it to acquire supplies from sources external to itself.

"It is, then, necessary that, after receiving the vivifying principle of the male, this ovum should be received into a nidus called the uterus, through the medium of its connexion with which it derives from the maternal system the remaining nutriment and support requisite for its full evolution and advancement to perfect animal life.

"During, and consentaneous with the above nisus of ovarian action, the uterus, by a correspondence with that action, is undergoing a state of preparation for the reception of the ovum into its cavity, and subsequent connexion with it. For this purpose, the uterus secretes a gelatinous fluid, resembling coagulable lymph, which inspissates, or concretes, into an organized substance, termed the decidua membrane; into this membrane the vessels of the ovum shoot, upon the common principle which effects the union of inflamed parts, and a connexion is established by the formation of a peculiar placental mass between the maternal and fœtal systems.

"Was the human female living in a state of nature, it is conceived that the above series of action would necessarily and invariably take place at the period of puberty. It happens, however, that in consequence of the operations of various physical and moral causes her impregnation is prevented, at that time, as well as at different subsequent periods of life. When this occurs, the actions of the generative system proceed, notwithstanding, as far as possible, in the discharge of their respective functions; but wanting the vivifying influence to be derived from the male, do not attain their full and proper acmé; the actions of the uterus in particular, except in certain cases of excessive local action, are insufficient for the formation of the decidua membrane; nevertheless, they are carried to a sufficient height to produce the effusion of a fluid from the secreting orifices; which fluid is the menstrual discharge.

"The uterine system is relieved by this discharge from its high state of local action, until the maturation and disappointment of another ovum, reproduces the phenomenon.

"Under this view of the subject, the efficient cause of menstruation may be defined—'An imperfect or disappointed action of the uterus in the formation of the membrane, (decidua,) which is requisite for its connexion with the impregnated ovum.'

"With regard to the final cause, it may be conceived that, looking upon the discharge as a deviation from what are to be considered the natural actions of the female, nature could have no final end in view, as it would be absurd to suppose an end contemplated, where no natural efficient cause was provided. Nevertheless, some anatomical evidence may be adduced, which proves that the efficient cause, whether natural or unnatural, was foreseen, if not intended. How, otherwise, is the perforated hymen to be accounted for? the apperture of which appears evidently calculated for the transmission of the menstrual fluid." 28.

Towards the close of the first chapter, we find Dr. Power admitting the possibility of menstruation going on during utero-gestation, in opposition to Drs. Denman and Hamilton, who deny it. Of Dr. Power's mode of accounting for this phenomenon we shall take no notice, because we think it equally unsatisfactory as his theory of menstruation in general. But we may take this opportunity of stating, that we have had such ocular proofs of the occurrence in question as to leave no more doubt in our minds of its occasionally happening, than we entertain of our existence at the present moment.

In the second chapter of the first Essay, we are happy to find Dr. Power on more practical grounds. This chapter is on the diseases of menstruation. The following short passage will show that our author's reasonings about the *unnatural* phenomenon of menstruation dissolve before the light of clinical observation and experience.

"It appears, therefore, proper to regard the occurrence of menstruation under the present state of society, as a *proper, natural, and healthy secretion, tending to the sanity and welfare of the unimpregnated female system*, and every variation from its customary appearances, as a state of true deviation, and frequently of morbid derangement, since it is rarely found to take place, without being connected, more or less, with a disturbed state of the healthy functions." 36.

Dr. Power considers the deviations from the correct menstrual process under three heads, deficient, excessive, and irregular menstruation.

1. *Deficient Menstruation.* In order to keep up appearances of consistency Dr. Power attributes the remote cause of this disordered state to "deficient action of the *ovaria*," the correspondent actions of the *uterus* being rendered proportionally defective. But he wisely adds a clause, that defective menstruation may be produced by "derangements in the whole or part of the general system."

This form of disease, when arising from imperfect organization, is, of course, incurable, and the patient is doomed to sterility.

"If, however, the organic defect exists only in a degree sufficient to produce a slow or retarded developement of the ovum, it may be attempted to excite the ovarian actions to increased activity, by stimulating applications to the loins, thighs, or pubes; as frictions, stimulating plasters, or the electric fluid; or the semicupium might be used; or ligature or a tourniquet applied around the thighs; dancing and sexual excitements would probably be found beneficial; and lastly, some of those medicines which have been conceived to exert a specific action on the uterus; what these are is doubtful, but the intention, it is conceived, will most probably be answered by hellebore, savine, and madder." 39.

When the disease springs from chlorosis, the more prominent exciting causes, our author imagines, may be sought in too copious or rich and undigestible aliment affecting the alimentary canal, or a defect of proper nourishment, sedentary habits, &c. In the treatment of this form, after attending to the removal of causes;

"The digestive powers may be strengthened or confirmed by gentle stimulants, or by promoting the natural action of the alimentary canal, as by mild aperients, steel, bitters, myrrh, and aromatics. The local irritations acting on the uterus should be obviated, by carrying away, or preventing, accumulation in the intestinal canal, by the occasional use of the stronger purgatives, as the aloetic compounds, calomel, jalap, sulphas magnesiæ, &c. or by emollients and stimulating injections; and the natural actions of the ovarium may be excited or encouraged, in the manner before described." 41.

The same observations, Dr. Power thinks, will apply to *suppression* of the menses, after they have been once established.

In our author's remarks on menstruation in *excess*, we do not see any thing but what is familiar to every reader; we shall therefore pass on to the subject of *painful menstruation*, attended with the discharge of membranaceous substances, which our author seems to attribute to an inflammatory secretion of deciduous membrane, as believed by Dr. William Hunter.

"The accompanying discharge is generally scanty, and not of the nature of menstrual fluid, but more resembling the effusions and weepings from wounded vessels, or the lochial discharge after parturition. The cause appears to be a too active or inflammatory state of the ovaria, throwing the corresponding actions of the uterus into excess; this may be the effect of peculiar constitution, influenced by constipation, luxurious living, or mental states." 50.

To relieve the existing paroxysm, Dr. Power recommends the spasmodic action to be taken off, by the free use of opium, or hyoscyamus, and the warm bath, with friction on the parts in pain. To these may be joined a cooling regimen, saline draughts, and occasionally antispasmodics. To prevent the return of these painful paroxysms, is a more important indication; and with this view, "irritation of the uterine system, from accumulation in the bowels and rectum, is particularly and regularly to be guarded against." The regimen should be cooling, and the local action of the uterine vessels may be diminished by the occasional application of leeches to the loins or pubes; while a counter-irritation may be kept up by a perpetual blister, or stimulating plaster to the back. We have seen the good effects of this plan in several cases of painful menstruation. In the sections on *irregular* menstrual actions we do not see any thing particularly requiring notice.

The 3d chapter of the work is on the "Management of Menstruation." This management consists in that attention to regimen, and the state of the *chylopoietics* which is recommended by all ranks and classes of society, medical and not medical, yet attended to by few. Dr. Power repeats the usual tale of the injurious effects of *tea*, as a common beverage. For our own parts, we should be sorry to see this light and cheerful drink banished from our social meetings, even were the golden days of Queen Bess to return, and the ladies' breakfasts to consist once more of beef-steaks and "Coombe, Delafield, and Co." We agree with our author, that "three meals in a day are better

than more;" nor will any but an Ascetic dispute the truth of the following position—"experience teaches us that, in human society, *dinner* is the best meal;"—at least it is by far the costliest. For habitual costiveness Dr. Power recommends the following pill, viz. aloes a scruple, ginger half a drachm, ipecacuan eight grains, divided into sixteen pills, of which one should be taken every day, an hour before dinner. We have lately seen two or three instances where a pill of the above description preserved its operative effect longer, and more steadily than any other form that could be devised.

Dr. Power's directions respecting the management of the discharge, when it does take place, are not very much calculated for the professional reader. We shall therefore pass on to the second Essay.

On a Species of Abortion. After reading this Essay, we really could not find any particular species of abortion treated of; but only a new cause, (we believe, for it is dangerous to be positive about novelty,) assigned for abortion occurring in the third, fourth, or fifth months of utero-gestation. This new cause is a *deficiency of oxygen*, owing to the chest being encroached on by the enlarging uterus.

"In consequence of the difficulties opposed to the pulmonary actions of the mother, the absorption of the requisite quantity of oxygen to supply her own system, and the rapidly increasing demands of the child, is interfered with, so that one or both must necessarily fall into disease; as affecting the child, this is occasionally productive of its death; after which the actions of premature expulsion succeed to remove the dead mass from the uterus." 82.

This secret discovered, the remedies soon suggested themselves—pure air—drink acidulated with citric or nitric acids—and, if these fail, "oxygen gas is to be mixed with atmospheric air, and inhaled by means of an oiled silk bag." 91.

We shall proceed no farther. We are sorry that we cannot admire the novel theories introduced in this little work. We should be much better pleased to see Dr. Power detailing useful facts (of which his present situation must afford him abundance) than framing ingenious hypotheses. We respect this gentleman's talents, and we trust that the few criticisms in which we have indulged, may tend to direct those talents to better purposes than they are here expended on.

XV.

Supplemental Review

AND

QUARTERLY PERISCOPE

OF

PRACTICAL MEDICINE, SURGERY, &c. &c.

WITH COMMENTARIES.

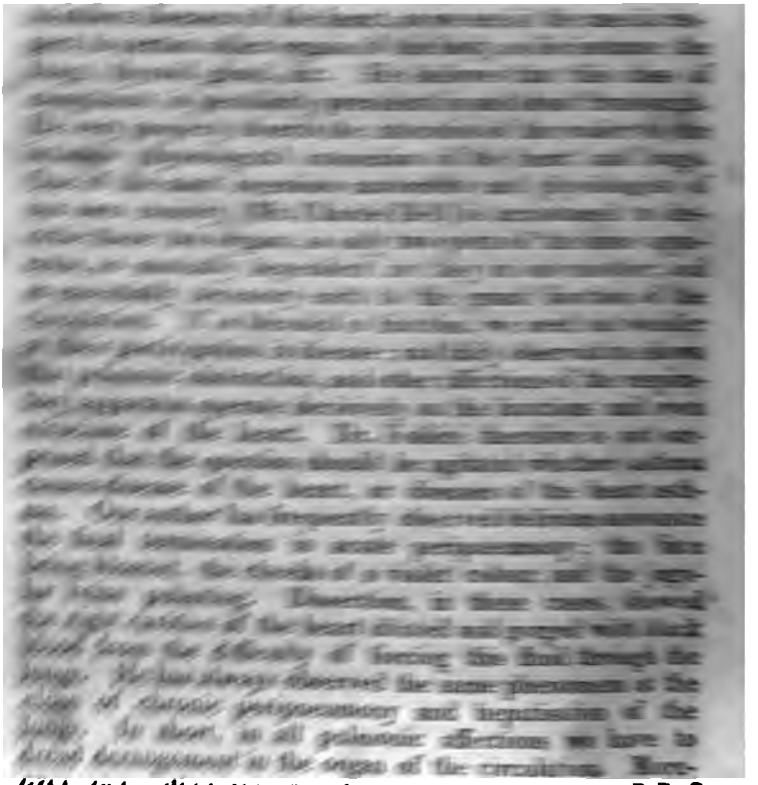
Paucis libris immorari et innutriri oportet, si velis aliquid trahere, quod in animo fideliter hæreat. SENECA.

Duo vitia vitanda sunt in cognitionis et scientiæ studio. ***** Alterum est vitium, quod quidam nimis magnam operam conferunt in res obscuras atque difficiles, easdemque non necessarias. CICERO.

1. *Cardiac Disease.** It is the object of M. Fodéré, in the present paper, to state some facts, and make some observations on diseases of the heart, that may assist the young or inexperienced practitioner in discriminating these dangerous complaints, especially as they take place in *young persons*, whom M. Fodéré's situation of physician to the Royal College of Strasburgh, has afforded him opportunities of observing.

General Observations. Our author seems to doubt whether the violent political agitations of the last thirty years have done more than increase the *functional* affections of the circulating organ; but, as he has himself shown that the moral emotions of our nature are continually operating on an organ endowed with the highest degree of animal excitability, there can be no doubt that the structure becomes affected by a long continuance or great degree of these. Such effects of the passions are greatly heightened by intemperance, especially in spirituous liquors, which not only derange the balance of the circulation at the time, but by deteriorating other organs, as the stomach, liver, &c. indirectly and ultimately affect the heart. M. Fodéré hazards a conjecture that climate and locality may have a tendency

* Memoire sur les palpitations et sur l'anevrysme de cœur. Par M. Fodéré. *Journal Compl.* No. 32—34.



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have their causes at a distance from the central organ, as in the stomach, liver, or bowels, from indigestion, worms, biliary derangements, &c. they generally disappear quickly on removing the causes, unless time has rendered habitual the functional disorder, or begun to alter the texture of the heart. We should be careful, therefore, how we assure our patients that palpitations and other phenomena of morbid action in the circulating apparatus, are purely nervous or sympathetic, however certain we may be that they were so originally; since, as we have just said, time and habit do much mischief. Functional disorders of the heart are more prevalent, in proportion to organic, among the class of literary, sedentary, delicate, and convalescent people, and our prognosis should be modified accordingly. In such classes, a trifling agitation of mind or exertion of body will cause the heart to palpitate, and the arteries to beat as violently as if the patient laboured under inflammatory fever—and we have seen medical men thrown greatly off their guard upon such occasions, having recourse to blood-letting and other antiphlogistic measures, when a little repose only was necessary. In like manner the translation of rheumatism from a joint, or the repulsion of an eruption, will be suddenly followed by violent palpitation of the heart, which as suddenly subsides when the rheumatic inflammation or cutaneous affection is reproduced in its proper place.

The prognosis in diseases of the heart is almost always unfavourable. Palpitation itself, however, especially when the breathing is not much affected, may continue for years, or even for a long life, without much inconvenience. Nevertheless, in general, it is to be viewed with a suspicious eye, for those who have been affected with it from youth upwards, very commonly die before the usual term of human existence. Diseases, whether of function or structure of the heart, are so varied in their symptoms, anomalous in their characters, and irregular in their progress, that nothing but the study of numerous individual cases can fortify us against the exigencies of practice. We therefore entreat our readers' patient attention to the following cases, the histories of which we shall abridge as much as possible, or consistent with perspicuity.

Case 1. On the 17th November, 1817, a young elve, sixteen years of age, was brought to the infirmary of the Royal College of Strasburgh, with the following symptoms:—the face flushed—the eyes sparkling—skin hot and dry—the chest stuffed—pains in the head. The pulsation of the temporal, carotid, and subclavian arteries was visible—and the action of the heart was so violent that it

was audible, and raised the clothes at each stroke. The pulse was full and hard—the appetite keen. The youth was of a full habit; and had been subject to nasal hæmorrhages. Viewing the cardiac affection as depending on growth, and on a want of harmonious balance between the vascular, respiratory, and nervous systems, M. Fodéré prescribed a copious general bleeding, warm pediluvia, absolute rest, aqueous drink, and diet almost purely vegetable. These means being insufficient, and the motions of the heart and arteries continuing too violent, a grain of digitalis was ordered four times a day. This medicine soon reduced the vascular action; but a train of nervous symptoms succeeded, which obliged him to intermit the fox-glove, in substitution of which nitre and camphor were given. From this time the patient grew daily better, and by Christmas he was able to leave the infirmary. He had several relapses similar to the above, at various intervals. They were all relieved by the same means; and when M. Fodéré saw the patient last, on the 18th September, 1820, nothing remained but a slight inordinate action of the heart, of which the youth himself was unconscious.

Case 2. On the 12th March, 1818, Master H———, aged 17 years, presented himself at the Infirmary, with his neck swelled, and complaining of pain in his ears, which were very red. He had no palpitations. These symptoms were removed by low diet, diluents, and pediluvia. On the 26th May a relapse; but now there was violent pain in the occiput, considerable hæmorrhage from the ears, enormous palpitation of the heart, hard, full pulse. Bled largely from the arm, which was repeated next day, rigorous abstinence from food, lemonade for drink, pediluvia daily, digitalis four times a day. On the 11th June he was able to leave the hospital, but still there was some palpitation of the heart. On the 7th August, of the same year, another relapse, requiring a repetition of the above measures. After this he was put upon a most rigorous regimen, abstinence from animal food, wine, beer, liqueurs, coffee, or any exertion of body or mind that might accelerate the action of the heart. He gradually, though slowly, recovered."

We shall pass over several cases of palpitation which were symptomatic of rheumatism, scorbutus, chorea, and nervous mobility, all of which easily cured were by the appropriate remedies for such disorders.

Case 3. The *eighth* case was that of a youth, 14 years of age, who had been treated by an eminent physician, for more than twelve months, for organic disease of the heart. M. Fodéré, on placing his hand on the region of the heart, perceived there the greatest disorder of function. The face, excepting the centre of the cheeks, was pallid, the strength gone, the eyes dull, and he complained of anomalous pains in various parts of the body. After a minute investigation, M. Fodéré suspected onanism, and the youth, on being closely pressed, confessed it. It was now decided that the palpi-

tations of the heart were nervous, and owing to debility. The pernicious custom was guarded against—the bowels were cleared with calomel—digitalis and antispasmodics were combined, and the cure was completed by decoction of bark.

We shall omit the ninth case, which is of minor importance, and proceed to a rather minute account of the tenth; because we have unfortunately seen several of a similar description, and in which our hopes had been buoyed up too much by the fallacious appearances which cardiac diseases so frequently assume.

Case 4. M. Fodéré was consulted, about two years ago, respecting a young lady, 18 years of ago, whose father was gouty, and whose sister died of tubercular consumption. This young lady was tall and large of her age, with considerable muscular force. Her pulse was slow, and indicative of languor in the vital organs—the sexual and other functions, however, were healthy. She complained to our author, as a thing of very trifling importance, in her estimation, that, for two years previously, she felt, occasionally, a pain in the left side of the chest, and stretching to the spine, which was sometimes so acute as to oblige her to remain motionless, for a short time while it lasted. On requesting to examine the thorax, M. Fodéré found the young lady bound up with stays drawn so tight that he could not introduce his fingers between them and the chest. When unlaced, our author perceived, with horror, the heart beating, with an undulating stroke, from the clavicle to the false ribs of the left side. He pronounced it, at least, in his own mind, a passive aneurism of long standing, the rupture of which he could not calculate the epoch of. He wished to avoid having any thing to do with the case, but was pressed by the family to undertake its management. He knew not well what to do; but viewing the languor of the circulation, and finding that the young lady had some indication of scurvy, he prescribed vegetable-antiscorbutic drinks, which soon had the effect of quickening the pulse, and lessening the palpitations. Encouraged by this, our author combined the syrup of cinchona with the above, and in a little time he was surprised to find the symptoms of cardiac disease disappear, and the patient get apparently well. The young lady was subsequently seized with a bilio-gastric fever, during the continuance of which, the heart did not manifest any unusual derangement of function, a circumstance that confirmed M. Fodéré in the hopes of a perfect cure of that disorder. The patient recovered from the fever, and our author discontinued his visits. In a few days, however, a messenger came running to M. Fodéré to say the young lady was expiring. He ran to her, but she was dead! She had been coming down stairs to dinner, apparently in perfect health, when the thread of life was thus suddenly snapped. Dissection showed the right ventricle passively dilated, thin, and torn, the pericardium being filled with black blood. The pulmonary artery was greatly dilated, and the lungs partially diseased in structure.

Such is the treacherous nature of diseases of the heart. The most terrible *organic* changes will frequently appear to be quite cured; while the practitioner feels mortified at the unnecessary alarms into which he had thrown himself and the friends of the patient. On the other hand, nervous *functional* disorder will mask itself in the most threatening forms, and harass physician and patient, for months or even years, with the fears of momentary dissolution, and, after all, vanish unexpectedly, and the patient regain perfect health. A knowledge of these things will render a physician cautious in his prognosis—the more experienced he becomes indeed, the more averse will he be to decide positively on the fate of his patient. He will, however, become more judicious in his treatment, and less liable to do mischief by pursuing unnecessary or improper measures.

Lancisi, de Haen, Frank, and many able physicians, have entertained an opinion, that cardiac diseases were occasionally hereditary. There can be no doubt, indeed, that many people are born with that structure of the heart and vascular system which, under the application of very feeble exciting causes, (or even without these,) is very apt to fall into disorder. Why should not this be the case with the heart, as well as with the lungs? Frank observes that it is not unusual to find aneurism of the heart in the fœtus, an example of which is seen under the word "*vie du fœtus*," in the Dict. des Sciences Medicales.

When M. Fodéré had charge of an hospital on the borders of the Mediterranean, during the late war, he met with many cases of disease of the heart among the peasantry, who are exposed to great and sudden atmospherical transitions, which derange the functions of the skin, and produce violent oscillations in the tide of the circulation, giving origin, he rationally supposes, to functional and organic disorders of the heart and great vessels.

Case 5. In the spring of 1806, M. Fodéré was called to the assistance of a young female peasant in the village of Gignac, whom he found emaciated, and complaining of constant uneasiness, pricking sensation in the skin, want of sleep, headach, and a rushing noise all over the body. She had menstruated but once, and that twelve months previously; since which, she had been subject to nasal hæmorrhages, and sometimes spitting of blood. The pulse was frequent and irregular. The same of the heart, but with violent palpitation both in the chest and abdomen—it was these pulsations that caused so much inquietude. Our author was much embarrassed as to the mode of treatment which he ought to pursue; but thinking that the suppressed menstruation might make part of the cause of these strange phenomena, he ordered leeches to the

sexual organs, semicupia, diluent drinks, and digitalis. Being ordered to another part of the country, M. Fodéré did not see the patient for twelve months; but was then agreeably surprised to find his patient in good health, having persevered a considerable time in the measures above mentioned.

Another case, somewhat similar, is related by our author, and then he concludes with the detail of a melancholy case, of which we shall present the prominent features.

Case 6. In the beginning of 1810, M. Fodéré was consulted by a merchant, Mr. S——, of Marseilles, aged 45 years, who appeared greatly out of breath in walking up a street to M. Fodéré's house. On attentive examination, our author concluded that there was an aneurism of the heart, or of the arch of the aorta. There was enormous palpitations through the whole chest, extending to the left arm, the muscular power of which was much affected. The two first ribs, as well as the clavicle of that side, were bulged out, and there was an evident engorgement of the liver, the cæliac artery pulsating nearly as much as the aorta in the chest. The face was flushed and spotted—the urine scanty and lateritious—the pulse full, frequent, and intermittent. The appetite and generative functions were unimpaired. Mr. S. coolly stated to our author that his father died by the bursting of an aneurism at the age of 48, and that he knew he had the same disease. All he wished, or at least expected, was to keep the malady at bay till he should arrive at the age of 50 years. Hitherto the patient had deprived himself of no pleasure—not even that of hunting; but our author persuaded him to adopt the rigid regimen and quietude of body so necessary in organic diseases of the heart. He was also bled from the arm, had leeches applied to the anus, and he had proper medicines for reducing the abdominal congestion. By adoption of these measures, he was astonishingly improved. The abdomen became flaccid, the urine more abundant, the palpitations less severe, even the bulging out of the ribs and clavicle subsided to their natural level. M. Fodéré now quitted Provence, but happened to pass through it again four years afterward, and called on his patient. But, alas! all the bad symptoms had returned, and the following year, Mr. S. died suddenly, as his father had done before him, and in the 50th year of his age, the goal at which he seemed to aspire!

Reflections and Conclusions. 1. M. Fodéré asks whether we can hope to cure aneurism, even when taken in the earliest stage of its progress? He seems disposed to doubt our power, in this respect, because few, if any, can keep a perpetual curb on their appetites and passions, without which a cure cannot be expected. Every one knows that to check a disease of this nature, we must reduce the quantity of circulating fluids, and diminish their stimulating properties. All temporary increase of the motion of the

fluids must also be guarded against by avoiding all exertions of body, and perturbations of mind. M. Fodéré justly observes that we should be anxious to remove palpitations of the heart in all cases, because a continuance of this inordinate action very frequently leads to organic disease. We should therefore carefully investigate the cause of this phenomenon, and endeavour to ascertain whether it depends on want of freedom in the respiratory function, on worms, gastric derangement, affections of the kidneys or bladder, spasmodic tendency, debility, exhaustion, or mere nervous irritability. Much of our success in the treatment will necessarily depend on our accuracy in ascertaining the occasional cause.

2. Can we hope, says M. Fodéré, to procrastinate long the fate of actual and confirmed aneurism of the heart or aorta, allowing that the patient adopts our precepts to the full? Our author thinks, and in this supposition he is supported by De Haen, that a patient, after aneurism of the heart is fairly formed, cannot survive more than five years, however guarded he may be in regimen, and however well he may be attended medically. Two or three instances have come within our own observation, where aneurismal enlargements of the heart, both active and passive, have continued longer than the aforesaid period, before they terminated fatally. At the same time, we believe that, in a majority of cases, death will take place before the expiration of five years from the commencement of actual enlargement of the organ of the circulation.

3. Dr. Fodéré considers, from attentive observation of facts, that of all kinds of drink for those afflicted with this dreadful disease, as well as all chronic inflammations, *whey* is the best. Of aliment, he thinks *milk* is least stimulant, and yet sufficiently nutritive. Of the powers of digitalis, in lowering the tone of the circulation, and relieving the heart, our author entertains a very favourable opinion, not from using it, in routine, but from carefully watching its effects.

Finally, M. Fodéré properly remarks that it is of great consequence to distinguish active from passive aneurism of the heart, inasmuch as the *former* requires a *decided* antiphlogistic treatment, which, in the same degree, would be injurious in the latter form of the disease. The pulse will, in general, lead to the diagnosis; but the whole phenomena of the complaint should be accurately investigated, in order to come to a just decision on the diagnosis.

2. *Ulceration of the Cartilages.** This rare disease begins with rheumatism, and like it also, attacks several joints in succession. No treatment seems to stop its progress, and at length it ends in complete anchylosis. The time, which this process took up in Mr. Mayo's cases, was about two months.

We recollect two sisters, who were afflicted with this disease. In one of them all the joints were anchylosed, excepting the shoulders, before we saw her; even the spine had not escaped. She lay in bed in nearly the same position, in consequence of the complaint, from fifteen to twenty years, at the end of which time she died. We saw the other soon after the disease commenced. It began in this instance in the phalanges of the fingers, most of which were either immoveable, or in a state approaching to anchylosis. The appearance of the joints during the progress of the disease resembled gout, excepting that there was less external vascularity. Leeches, blisters, mercurials, sea-bathing, soda, potass, &c. were tried in vain. The result of the latter case we do not know, but we have reason to think that the disease did not extend farther than the extremities. Both of these ladies were married, and had the scrofulous diathesis, and one of them had a family of children.

3. *Extra-Uterine Conception.*† Among the aberrations of Nature (which fortunately are rare in the generative process) none are so truly deplorable as extra-uterine conception. The following case presents many points of interest to the pathologist and physiologist, which we deem it proper to record.

"Dominica Mirone, 23 years of age at the epoch of her marriage, was, before that period, subject to vomitings, fluor albus, and hysterical affections. Seven years after marriage she became a mother, at the regular time. She had afterward a seven month child. In December, 1817, she became pregnant for the third time, and this pregnancy lasted sixteen months. In the second month she had some show of the menses—in the third month she experienced pains in the lower belly, and a considerable serous discharge from the uterus. From the fourth to the thirteenth month she menstruated irregularly. In the fifth month she felt the fœtus; in the seventh very distinctly. These movements continued till the thirteenth month, principally in the left side. The breasts be-

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* Mr. H. Mayo, *Med. Chir. Trans.*

† Memoria sopra una gravidanza extra-uterina. Per Laurent Rizzo

came enlarged in the sixth month, and furnished some milk in the seventh. In the twelfth month the breasts subsided to their original dimensions. About this period the woman felt what she conceived to be labour pains. In the thirteenth month a uterine hæmorrhage took place, and lasted some days. At different periods of the extra-uterine pregnancy, she suffered dreadful colicky pains—frequently she had fever, and bilious vomitings. In the sixteenth month she was seized with acute fever, and died with symptoms of peritonitis."

Dissection. On opening the abdomen, Dr. Rizzo found the peritoneum inflamed, and some gangrenous spots on it. A large and oval body was discovered in the abdomen, containing a fœtus enveloped in its membranes which were gangrened and burst. Two hydatids were attached to the chorion, containing a yellowish fluid. The chorion had contracted adhesions with all the neighbouring parts, especially the epiploon, colon, posterior face of the uterus, &c. The placenta was attached to the peritoneum covering the vertebral column. The situation of the fœtus was that of a natural pregnancy. The uterus was perfectly sound and natural. The left ovary presented nothing remarkable—the right one was obliterated.

4. *Neuralgia.** This distressing disease becomes more common every day. It would seem as if the progress of civilization and refinement has a more than proportional effect on the *nervous system* of the human constitution, rendering it more irritable and morbidly sensible to the various agents around us, and consequently engendering a host of diseases to which our forefathers were but little subject, comparatively speaking. The following case is interesting and instructive.

A lady, 57 years of age, of strong constitution and good health, was bitten by a little girl who was delirious in fever. The wound was on the back of the second phalanx of the little finger of the left hand. No attention was paid to the circumstance; but, in a few days, pain commenced in the finger, spreading successively to the hand, forearm, and elbow, in the line of the cubital nerve. The wound was cauterized at a white heat, so as to destroy the nervous filament, but this measure produced no benefit, and the neural-

* Observation d'une Nevralgie Anomale. Par le Docteur Ferrus. *Journ. Comp. May*, 1820.

gia ascended to the armpit, with increasing violence. Fomentations, fumigations, and large blisters were ineffectual, as were also embrocations, narcotics, the warm bath, &c. It was curious that each time she went into the bath she experienced a sensation of excessive *coldness* throughout that half of the body corresponding with the diseased upper extremity, and an intense *heat* in the opposite side. The equilibrium became restored as soon as she left the bath. Two applications, of fifty leeches each, to the arm, produced a temporary remission of the pain. The patient now experienced a sensation of tightness and stuffing in the chest, to which succeeded a violent cardialgia with vomiting of every thing taken into the stomach. These symptoms lasted six months.

It is to be remarked that the paroxysms of pain always commenced in the wounded finger which induced the patient to request amputation of the joint. About this time there occurred, for a few days, a remission of the symptoms, after which, a new train ensued. The vomitings and cardialgia ceased entirely, (the neuralgia of the arm remaining as before,) but a copious diarrhœa took their place, and continued for two months. The neuralgia of the digestive organs now shifted to the uterine system, producing violent pain in the hypogastric region, and suppression of the menses.

M. Feron now applied the moxa near the elbow for fifteen minutes, which had an astonishing effect. The pain in the arm ceased—three days afterward the chest became free—the diarhœa disappeared—the appetite and embonpoint finally returned. This was in May; but. unfortunately, in October following, the neuralgic affection of the arm reappeared, together with the other constitutional symptoms before enumerated, and with the addition of an acute pain in the meatus auditorius externus. A new moxa was burnt on the arm, but not with the same success as before. It only caused a considerable mitigation for a time. The complaint is now periodically exasperated on certain days, and has continued altogether for fourteen months. Time or a change of climate is looked to as the principal hope of cure or alleviation.

In the 4th number of the Revue Medicale, M. Bousquet has made some pertinent reflections on this case. He particularly, and with reason, asks why M. Feron did not repeatedly apply the moxa, seeing that it entirely suspended the complaint for some months, in the first instance, and mitigated it in the second? Baron Larrey has had much success with this measure; but he does not content himself

with one or two applications of the moxa ; he burns it ten, twelve, or more times, and follows the pain wherever it takes up its domicile. In neuralgic affections, M. Delpech destroys the nerve by the actual cautery, and when the eschar separates, he permits not the wound to heal, but keeps up a long-continued suppuration.

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5. *Oil of Croton.* A good deal of interest has been lately excited among the profession respecting this *new* and curious substance, a single drop of which produces copious and sometimes violent purging. We have been favoured with a communication from John Fleming, Esq. M. P. pointing out accounts of this medicine published by preceding authors, and also by himself, affording another instance of the adage that there is " nothing new under the sun."

Murray, in the 4th volume of his Apparatus Medicaminum, page 149, gives the following botanical description of the plant from whose seeds the oil is obtained.

" *Croton Tiglium*, foliis ovatis glabris acuminatis, caule arboreo, LINN. *Sp. pl.* p. 1426. Cadel-Avanucu, *Hort. Malab. Tom.* 2, *p.* 61. Rumphius also describes the plant and oil, in his *Herb. Amboin. Tom.* 4, *p.* 98.

We shall quote the following passage from Rumphius :—

" Sed tota stirps, potissimum tamen folia, valde acris, ita ut os, labia, fauces inflammatæ intumescunt, et ardor usque ad anum percipiatur. Radix grauis mitior. Olim grana per totam Indiam Orientalem Crebro in usu fuerunt *ad lympham hydropicorum per alvum præprimis eliminandam*, in iis vero, quorum ventriculus debilis, simul emesis subsequuta. Fortioribus bina grana sufficerunt, aliis granum unum cum semisse. Variis aliis in morbis, *in quibus purgantia fortiora opportuna videntur*, ista in India adhibent. *Et hanc quidem acrimoniam oleo ipsi seminis inesse*, tam ex dictis, quam inde apparet, quod olei ex siccis granis expressi *gutta una* cum canariensi vino capta, vulgare apud chirurgos in India degentes purgans constituerit."—*Rumph. Tom.* 4, *p.* 98.

Another writer observes that the oil of croton rubbed about the umbilicus purges in the same manner as when taken internally.

In the 11th volume of the Asiatic Researches, Dr. Fleming has published a valuable paper on the Indian medicinal plants and drugs, in which the croton tiglium is thus noticed :—

" The seeds of this plant were formerly well known in Europe, under the names of *grana tiglia*, and *grana molucca*. They were

employed as hydragogue purgatives: but, on account of the violence of their operation, they have been long banished from modern practice. For the same reason they are seldom used by the Hindu practitioners, though not unfrequently taken as purgatives, by the poorer classes of the natives. One seed is sufficient for a dose, being rubbed with a little rice gruel, or taken in a bit of plantain fruit."*

We think the medicine in question is deserving the attention of the faculty at large.

6. *Acute Inflammation of the Medulla Spinalis.*† Affections of the spinal brain have, of late, much occupied the pathological physician, and therefore we deem it a duty to bring every detached fact, bearing on an investigation so recently commenced, before the profession as early as possible.

Case 1. Mary Brisset, 27 years of age, of nervous temperament, but hitherto enjoying good health. was accused (wrongfully) of having committed a theft. The menses were flowing at the time, but became suddenly suppressed. She was thrown into a state of the greatest mental agitation and despondency in consequence of the false charges against her moral character. On the third day she was found in a state of complete abolition of the functions of sense and intelligence. Taken to the Hotel Dieu, the stupor disappeared in about six weeks, but fatuity continued; on account of which she was transferred to the Salpetriere, on the 18th August, 1818, presenting the following symptoms;—countenance wild—difficulty of articulating words—answers slow, and confused—debility, but not paralysis of arms and lower extremities—listlessness and indisposition to motion—sometimes paroxysms of anger and impatience—the vital functions perfectly healthy. These symptoms scarcely varied during fifteen months—excepting a great increase of corpulence. On the 15th January, 1820, she was seized with convulsions, followed by foaming at the mouth, turning up of the eye-balls, grinding of the teeth, tetanic closure of the jaws, profound stupor, convulsive motions of the trunk, immobility of the limbs, pulse full, frequent, and irregular, respiration short, embarrassed, and precipitate, involuntary discharge of fæces—clammy, rank perspirations. After three days passed in this state, the patient died.

Autopsia. Skull thick, and its vessels injected—superior longi-

* Some cases of tic douloureux have lately been relieved, and even removed, by a drop or two of oil of croton applied on the tongue. The effect on the nerve was almost instantaneous. *Ed.*

† Pinel, fils.

tudinal sinus gorged with blood—tunica arachnoidea presenting marks of chronic inflammation, viz. thickening of its texture, layers of coagulable lymph, serous effusion, and adhesions. Cerebrum and cerebellum presented nothing remarkable. The spinal canal was opened with great care, and the coverings of the spinal brain appeared sound. These being slit open the whole length of the vertebral canal, a pultaceous disorganization of the medulla itself was easily recognised, beginning at the fourth cervical vertebra, and extending to the first lumbar. Throughout this whole space the medulla was reduced to a kind of bouilli, yellowish, semi-fluid, and inodorous. Towards the lumbar region the medulla resumed its ordinary consistence; and *there* it was bathed with a reddish serosity. The thoracic and abdominal viscera appeared remarkably healthy, excepting that the inner surface of the stomach was somewhat red.

We have not been particularly edified by M. Pinel's remarks on this case. The most interesting pathological fact is, the *physical* effect of *moral* causes. The sudden suppression of the menses, from mental emotion, was soon followed by disorder of other and important parts.

Case 2. Felicia Lepoigny, of sanguineous temperament, menstruated at 11, and enjoyed good health till her 15th year. At this time being frightened by the entrance of the Russian soldiers into the village, and some attempts by one of them on herself, she was seized with a paroxysm of epilepsy, which returned, with shortening intervals, until her intellectual faculties gave way, and she was conducted to the Salpetriere in 1816, in a state of complete idiotism, complicated with epilepsy, attacking her every four or five days. In this state she continued, without any material alteration, for four years. In January, 1820, a succession of dreadful paroxysms of epilepsy and convulsions terminated her wretched existence.

Autopsia. Dura mater strongly adherent to the skull, especially in the right parietal fossa—tunica arachnoidea healthy, but rather injected—substance of the brain unaffected—excepting turgescence of its vessels. The cerebellum was rather soft but sound. The spinal brain being laid open its whole length, presented a great turgescence of its venous system. Towards the dorsal region a disorganization, similar to that recorded in the preceding case, was found in the medullary substance; extending from the plexus of nerves going to the arms, as far as the lumbar region. The thorax and abdomen presented no organic lesion.

As acute inflammation of the spinal marrow is a disease little known, M. Pinel endeavours to ascertain what are the principal symptoms by which it is characterized. These he thinks are 1$^{mo.}$ annihilation of the nervous functions; 2$^{do.}$ convulsive motions of the trunk: 3$^{tio.}$ evening accessions of fever. *Complete* abolition of the nervous functions happens but in very few cases. Hæmorrhages in both hemispheres, or general softening of the brain, can alone produce

such an effect. But as in the brain, hæmorrhages and softenings are usually confined to a hemisphere, so the symptoms attending such states are never so general as where the spinal marrow is affected. The experiments of Cuvier, Le Gallois, and Philip, prove the importance of the vertebral brain, and may give us some idea of the effects which disorder of its structure may be expected to produce on the nervous system.

Our author thinks that convulsive motions of the trunk, and annihilation of voluntary motion, are among the most certain signs of acute phlogosis of medulla spinalis. He conjectures also, that those paralytic affections of the extremities following apoplexies, are owing to some compression, or some sympathetic affection of the spinal nerves. The evening accessions of fever prove that this disease, in the instance quoted, was of the acute species—probably epilepsy is the result of the chronic form of the medullary phlogosis. But our author is leading us into the region of hypothesis or conjecture, and we have only to remark, in the language of Sydenham—"nobis vero qui non ultra quam res ipsa loquitur sapere audemus, perinde est, an hæc, an alia aliqua hypothesis phenomena rectius solvat." Cap. iv.

7. *Acupuncture.** Of the remedial measures which have been imported into Europe from the Asiatic and ultra-gangetic nations, shampooing, nose-making, moxa-burning, and acupuncture, are the most distinguished. When we consider the great antiquity of civilization among the Chinese and Hindoos, we cannot but conclude, that observation and experience must there have brought to light many important remedies, of which, however, we are almost entirely ignorant. Mr. Wafer, the surgeon of Dampier, relates that the Darien Indians employ a kind of acupuncture, for the purpose of local blood-letting.

"The patient is taken to a river, and seated upon a stone in the middle of it. A native, dexterous in the use of the bow, now shoots a number of small arrows into various parts of the body. These arrows are prepared purposely for this operation, and are so con-

* A Treatise on Acupuncturation; being a description of a Surgical Operation originally peculiar to the Japonese, and Chinese, and by them denominated Zin-Kiko, now introduced into European Practice, with Directions for its Performance, and Cases illustrating its Success. By James Morss Churchill, Member of the Royal College of Surgeons in London, Octavo, pp. 86, and plate of instruments. London, 1821.

structed that they cannot penetrate beyond the skin, the veins of which, opened by the puncturation, furnish numerous streams of blood, which flow down the body of the patient." P. 8.

It is very remarkable that this practice is common also in the Society Islands and at Otaheite, as we have been informed by a gentleman who visited those places with Vancouver, and described to us the process, almost in the words which Mr. Churchill uses. Leaving this curious coincidence between two widely distant and uncivilized tribes to the consideration of the naturalist or historian, we may remark, that the process alluded to has no affinity to acupuncture as practised in the East, and now in Europe. Nothwithstanding the boasted efficacy of the measure, according to the Japanese and Chinese, it did not attract general attention in Europe. In its favour, however, may be enumerated Ten-Rhyne, Bidloo, Kæmpfer, and Vicq-d'Azyr, but none of these had personal experience of the operation. Of late years several practitioners in France have performed acupuncture, and some favourable reports have been made in the Journals. Mr. Churchill's attention was lately directed to it by his friend Mr. Scott, of Westminster, who, he believes, was the first who performed the operation in England. The success which Mr. Churchill observed in Mr. Scott's practice, led himself to its adoption; and the result, he observes, warrants a recommendation of the measure in the strongest terms.

The method of performing acupuncture is simple and easy to any one possessing common anatomical knowledge. It is only necessary that the operator should avoid the course of large vessels, nervous trunks, and the tendons of muscles—though it is not proved that the *latter* sustain any injury from the puncture of the needle. The operation as practised in Japan, is thus described in a historical work.

"'The place made choice of for the puncture, is commonly at a middle distance between the navel and the pit of the stomach, but often as much nearer to, or farther from, either as the operator, after a due scrutiny, thinks most proper; and in this, and the judging rightly how deep the needle must be thrust below the skin, so as to reach the seat of the morbific matter, and giving it a proper vent, consists the main skill of the artist, and the success of the operation is said to depend. Each row hath its particular name, which carries with it a kind of direction, with regard to the depth of each puncture, and the distance of the holes from each other, which last, seldom exceeds half an inch in grown persons, in the perpendicular rows, though something more in those which are made across the body, thus, . . .
. . . .
. . .

"'The needles which perform the operation are made, as was hinted at first, either of the finest gold, or silver, and without the least dross or alloy. They must be exquisitely slender, finely polished, and carry a curious point, and with some degree of hardness, which is given by the maker by tempering, and not by any mixture, in order to facilitate their entrance, and penetrating the skin. But, though the country abounds with expert artists, able to make them in the highest perfection, yet none are allowed, but such as are licensed by the emperor.'" 17.

It would seem, from the imperfect accounts that have reached us, that the Asiatics employ acupuncture chiefly in diseases of the abdominal cavity and viscera, such as colic, tympany, &c. but it is not in those diseases that our author has experience of the operation. The Indians themselves, however, extend the measure to most cases of cephalalgia, comatose affections, ophthalmia, &c. They puncture the chest, back, abdomen, &c. for affections of those parts, and also as a cure for dysentery, dyspepsia, hysteria &c. It is only in "local diseases of the muscular and fibrous structures of the body," that Mr. Churchill has hitherto employed acupuncture, but he means to extend its use when opportunities occur. He considers the operation as inapplicable or injurious in diseases of an inflammatory character—a distinction observed by those who have practised this measure. M. Berlioz, of Paris, appears to have employed this curious means of relief pretty extensively, in local pains of a nervous character, and with much success. Speaking of the diseases to which acupuncture is applicable, M. Berlioz remarks—

"'Vague and wandering rheumatism sometimes attacks the external muscles subservient to respiration; the patient is obliged to remain motionless; every motion of the trunk compels him to cry out: a deep inspiration is very difficult, and coughing occasions such cruel pains, that expectoration is impossible. Acupuncturation dissipates instantly this state of distress, and renders to the muscles their full liberty of action. In the space of one or two minutes, a patient whose sufferings drew from him tears, exclaims he is quite cured.'" 29.

These observations are corroborated by the experience of Dr. Haime of Tours, who has lately published an interesting memoir on acupuncture, in the 13th volume of the "Journal Universel des Sciences Médicales." We shall quote a case as an example—

"A woman had suffered for several days with wandering rheumatic pains, which continued daily to increase in violence; there were, however, at all times, fixed pains in the shoulder and in the

right arm, which acquired such a degree of intensity by intervals, that the patient could not refrain from crying out. She was in this state when she came to consult me: finding, however, neither alteration in the pulse, nor increase of heat, nor redness of the skin, nor tension, nor swelling in the part affected, I considered the case to be simple rheumatalgia, and passed the needle in the middle of the arm, between the fibres of the triceps brachialis muscle; the place designated by the patient as the seat of the pain. The pain was driven into the fore arm, and the second puncture caused it to descend into the hand, and a third being made in this part, caused it totally to disappear, and the patient said with delight and astonishment, she was cured; and was so satisfied with this treatment, that she spoke of it to every body." 36.

We shall now proceed to notice the cases which occurred in Mr. Churchill's own practice.

The *first* was a bricklayer, ætat. 30, who came to Mr. C.'s house supporting himself by a stick in one hand, and resting the other against the wall.

"The body was bent at nearly right angles with the thighs, and his countenance indicated acute suffering. He had been attacked, he said, three days before, with darting excruciating pains in the loins and hips; every motion of the body produced an acute spasmodic pain, resembling an electric shock; and the attempt to raise the body to an upright position was attended by such insupportable agony, as obliged him to continue in this state of flexion rather than encounter it by altering his position. There was no more constitutional disturbance than was to be expected from three days and nights of constant pain; the pulse was a little quickened, and the tongue white, but I attributed this derangement to the irritation set up by the pain and loss of rest. I directed him to place himself across a chair for support during the operation, and I immediately introduced a needle of an inch and a half in length into the lumbar mass on the right side of the spine; in two minutes time I observed that he seemed to rest the weight of his body more on his limbs, and in the next instant, without any inquiry being made, he observed, that he felt his limbs stronger from the "pain having left his hips." He next plainly indicated that the disease was lessened, by raising his body; from which he only desisted, by being desired to remain at rest, through fear of the needle being broken. The instrument having remained in its place about six minutes, the patient declared he felt no pain, and could, if he were permitted, raise himself upright; it was then withdrawn; the man arose, adjusted his dress, expressed his astonishment and delight at the sudden removal of his disease, and having made the most grateful acknowledgments, left the house with a facility as though he had never been afflicted." P. 49.

The second case was a young man employed in a timber merchant's yard, who, whilst in the act of lifting a very

heavy piece of mahogany, was seized suddenly with a violent pain in the loins. The weight fell from his hands, and he was incapable of raising himself. He was immediately cupped and blistered on the part; but two days passed without much relief.

"On the third day the operation of acupuncturation was performed upon the part of the loins pointed out as the seat of the injury, which, as in the former case, dissipated the pains in five or six minutes, and restored the motions of the back. He returned, however, the next day, with the same symptoms as at first, but in a mitigated degree. A needle was now passed to the depth of an inch on each side of the spine, which, as I expected, terminated the disease in a few minutes, and it was with pleasure that I understood the next morning, that the man had gone to his usual employment." 51.

We must pass over the other cases detailed by our author, in order to state some particulars of the effects of acupuncture on Mr. Scott, the gentleman who first introduced the operation into England. Mr. Jukes, of Westminster, received an urgent message from Mr. Scott, to visit him immediately. Mr. J. found him in bed, and with a countenance expressive of much anguish, having suffered, for three days, from severe pain in the loins, which he attributed to a sudden transition from a warm room to a foggy nocturnal atmosphere.

"Within the last twelve hours it had acquired such a degree of violence that even respiration was insupportable, except the body were fixed in such positions as permitted the least possible motion. An attempt to resume the erect posture, produced violent spasmodic action of the muscles of the back, which appeared to be communicated by sympathy to those of the abdomen and chest, impeding respiration with a convulsive effort; nor could any motion of the body be made without producing this distressing effect. Neither fever nor general derangement was present; the secreting organs of the body properly performing their function, proved the external locality of the disease. In this state of things, acupuncturation presented itself to us as likely to afford relief, and it was therefore immediately resorted to.

"'I applied an exhausted cupping-glass upon the integuments, opposite to the second lumbar vertebra, and midway between this bone and the edge of the latissimus dorsi muscle, which was the part referred to as the most concentrated spot of the disease. As soon as a needle had penetrated to the depth of an inch, a sensation arose apparently from the point of the instrument, which the patient described as resembling that which is produced by the passage of the electric aura, when elicited to a metallic point, diffusing itself at first to some distance around the part, and then extending itself up the side to the axilla. This sensation continued to be felt for the space of a minute, when a violent pain struck into the right iliac

region, immediately above, and corresponding with the line of, the crista of the ilium. No pain was now felt in the back, except a dull aching of about two inches in breadth on the right side of the spine, extending from the lower part of the neck to the sacrum, corresponding with the situation and course of the longissimus dorsi muscle. The pain above the hip now began to subside, and in the space of three minutes from its commencement, had ceased altogether.

" ' The uneasiness along the course of the spine still remaining, a needle was introduced about an inch from one of the upper dorsal vertebræ, and another in a corresponding situation to one of the lower lumbar vertebræ. The pain in the right side was in a few minutes entirely dissipated, and the patient arose, declaring that, excepting a slight degree of uneasiness on the posterior part of the chest, near the angles of the inferior ribs, he was completely relieved from the disease. He, however, requested I would pass a needle in this last situation ; on effecting which the pain soon left its last refuge, and the patient dressed himself, and left his house in the most perfect health. I have this day seen him, and he assures me that he has not experienced any return of the affection."

We shall conclude our analysis with one short extract, descriptive of the operation.

" The handle of the needle being held between the thumb and fore finger, and its point brought into contact with the skin, it is pressed gently, whilst a rotatory motion is given it by the finger and thumb, which gradually insinuates it into the part, and by continuing this rolling, the needle penetrates to any depth with facility and ease. The operator should now and then stop to ask if the patient be relieved ; and the needle should always be allowed to remain five or six minutes before it is withdrawn. This mode of introducing the needle, neither produces pain (or at least very little) to the patient ; nor is productive of hæmorrhage, which Dr. Haime says arises from the fibres being separated, rather than divided by the passing of the needle ; the former of which (the absence of pain) is a point in its favour, which few surgical operations possess." P. 81.

We have now brought forward sufficient matter to excite the attention of our surgical brethren towards the publication of Mr. Churchill, and the operation of acupuncture—all that can be expected of us in this stage of the business.*

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8. *Renal Calculi.*† Mr. Earle differs in opinion from Dr. Marcet, and most recent writers on this subject, respecting the formation of calculous matter, and suggests the

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* The needles may be had at Mr. Blackwell's, Bedford Court; and Mr. Laundy's, St. Thomas Street, Borough.

† Mr. H. Earle. *Med. Chir. Trans.*

probability that, in some instances, the process may depend on a local morbid action of the kidney, independent of any predisposing constitutional cause. In support of this opinion, several important cases and dissections are adduced. We ourselves have long suspected that the disposition to form urinary calculi has been often superinduced by external injuries in the region of the kidneys; particularly in those who void gravel only after riding on horseback, or from the motion of a carriage. Analogy would lead us to suppose that the calculi are generated under these circumstances by an inflammatory process, which we know has the effect of retarding or suspending the specific functions of secreting organs, and of favouring the production of apparently new formations.

The treatment suggested by Mr. Earle for this species of gravel is judicious, and appears to have been beneficial in one or two instances.

In all instances where the affection can be at all traced to local injury, we should combine local with general treatment, and endeavour to arrest the morbid action by the abstraction of blood, warm bathing, and counter-irritants. Such a practice might perhaps be advantageously adopted in other cases not arising from injury, particularly where only one kidney appears to be affected; or, although the disease may have originated from constitutional derangement, it is highly probable that the local diseased action may be kept up after that has subsided, particularly should there be any calculus in the kidney too large to pass by the uterer." 227.

The counter-irritation Mr. Earle prefers, is that produced by a seton.

9. *Colchicum Seeds.** Dr. Williams, with laudable zeal and unwearied industry, continues his observations on the seeds of Colchicum autumnale—on the proper time for gathering and preserving them—on their superiority over the root of the plant—and on their efficacy in subduing chronic rheumatism, and other painful diseases. As the contents of Dr. Williams's valuable paper are now sufficiently diffused through the profession, we merely allude to them here, for the purpose of informing our readers that the objection we urged in our review of Mr. Haden's work, in our last number—namely, the *scarcity and dearness* of

* Dr. Williams. *Med. Repos. June*, 1821.

the Colchicum seeds, is now substantially removed. We have received a letter from Mr. FITCH, CHYMIST, of IPSWICH, with some specimens of the Colchicum seeds, gathered at different epochs, which we have distributed among our friends for forming the *vinum sem. colchici*,* and employing it in their practice. Mr. Fitch has gathered between one and two hundred pounds of the seeds, and, in a short time, expects to collect nearly a ton weight of them. Those gentlemen, therefore, who are anxious to employ the remedy, can procure it from Mr. Fitch at a very trifling expense—we believe not more than seven or eight shillings per pound.†

10. *Extraordinary Case of difficult Labour.*‡ We notice the following case, because we have often wondered that similar cases do not happen oftener.

On the 24th October, Dr. Battzell was sent for to Mrs. N. who had been in labour two days. The liquor amnii had passed off with the first slight pains, and, as the head of the child did not advance, the family physician was called in. The presentation was found to be natural; but the pains had now ceased altogether, and the patient had had a convulsive fit. On examination, Dr. B. discovered the os tincæ fully dilated, and recommended the application of the forceps. But repeated attempts with this instrument proved fruitless.

"Being satisfied that the delivery was impracticable with in-

On the following morning, bleeding was resorted to a second time, but with the like failure in repeated efforts. From manual examination and combined circumstances, I inferred the case to be what is usually termed 'the hour-glass contraction' met with sometimes in the retention of the placenta, but, never heretofore apprehended by me, as a cause of failure in delivery." *Medical Recorder, No.* 14, *p.* 215.

Convulsions now recurred repeatedly, and that evening the unfortunate woman expired. This lady was in the prime of life, of low stature, extremely fat and corpulent, and this was her first child.

On dissection, the uterus was found elongated, forming a tight case over the breech of the child. On opening into this part, some offensive effluvia issued forth. The uterus was closely contracted on the body of the child, presenting inequalities correspondent to its shape.

"Near the neck and shoulders of the child, the uterus had the appearance, as if a circular band, about half an inch wide, had been forcibly drawn around it. The stricture was accompanied with a prominence on each side, forming as it were, a groove it its course around that part of the uterus. It was this which I felt in endeavouring to pass my hand over the back and shoulders of the child. This fixed and forcible contraction, as with a cord, bound fast the fœtus, and presented an insurmountable barrier, defying all the efforts that were used at delivery. The fœtus lay in its natural position with its breech uppermost, the knees bent and feet drawn close to it. It was a male child, large and perfect in its structure. P. 216.

Our author queries what would have been the effect of abstraction of large quantities of blood, administering at the same time the ergot of rye?

11. *Arteritis.** Mr. B. Golding and the editor of this journal have lately attended an exquisitely marked case of *arteritis*, accompanied with *hyperirophia* of the heart. A considerable proportion of the symptoms enumerated in the article "*arteritis*" in our last number, were present. The patient had neglected his complaint till the disease, especially of the heart, had made great progress. Mr. Golding will probably publish the case. Dr. Johnson did not see the patient till two days before his death. The prominent symptoms were, very laborious respiration, not affected by

* See Art. 4 of last number, page 50.

position—violent and diffused action of the heart—intense throbbing of all tangible arteries—pulse excessively hard; about 105—great anxiety and restlessness—no sleep—thirst—very little cough—tongue clean—bowels deranged. The blood drawn at this late stage was remarkably buffed and cupped; but little or no alleviation was produced.

On dissection the lungs were sound; adherent on the right, but free on the left side, with about a pint of reddish serum, effused there. The heart was considerably enlarged, and entirely empty of blood. The parietes of the left ventricle were an inch and a half in thickness, but the cavity not at all dilated, constituting the hypertrophia simplex of Laennec. The right side of the heart did not seem affected. The internal tunic of the aorta and all its branches, carotids, brachials, iliacs, and femorals, was red as crimson, and all the blood in the body was fluid and thin. No other organ than the heart and arteries was affected. The man was about thirty years of age; had been ailing for eighteen months, but only two months what he called ill. He was about a week confined to bed. The pulmonary artery and the veins of the body were unaffected. The inflammation was confined to the aortic system.

12. *Diseases of the Brain.** To ascertain the actual seats of diseases is rendered extremely difficult, in consequence of their manifestations being often at a great distance from their original and fixed abodes. The play of the sympathies enables maladies to appear before us *en masque*, and thus mock our most sapient conclusions. In fact, they verify to the very letter, the fable of Proteus. The following case will sufficiently illustrate these observations:

Theodosius, a young man, 24 years of age, of an excellent constitution apparently, and who had never been ill, complained, in Jan. 1815, of feeling slight giddinesses in the head, and momentary indistinctness of vision, accompanied by a sense of oppression on the chest, and a check on taking a deep inspiration. Mean time, the tongue became foul, the appetite impaired, and the digestion difficult. To these symptoms succeeded nausea and vomiting, at uncertain, but shortening intervals. The gastric irritability quickly increased, so that by the 1st February no aliment would lie on his stomach. At this epoch, an emetic was prescribed, on the dangerous principle—*vomitus vomitu curatur*. The patient brought up much

* Journal Gen. de Med. No. 290

bile, and a large lumbricus; but no abatement of the symptoms followed; on the contrary, the gastric irritability was much increased. Opium was tried—a Burgundy pitch plaster, *with emetic tartar*, was applied to the epigastrium, and afterward a blister to the same part, while the patient was supported by clysters of broth, and immersed in the warm bath twice a day. But all was in vain, for he expired on the 8th of February, never having complained of pain in the head, till the morning of the day on which he died.

Dissection. Four or five fungous vegetations on the superior part of the dura mater—adhesion of the dura mater to the pia mater opposite to these excrescences—ossification commencing in the falx major—six or seven ounces of water in the left, and four or five ounces in the right lateral ventricle—the sinuses and vessels of the brain gorged with blood. The liver was gorged with blood—and there was slight phlogosis of the mucous membrane of the stomach.

That this young man died of inflammatory action there can be no doubt—and that no proper means were taken to prevent the fatal catastrophe, except the low regimen, there can be as little doubt—at least, in this country. English physicians may sometimes carry depletion beyond the normal point; but they do not allow their patients to slide out of the world on mucilage of gum arabic and *eau sucré*, without making an effort to save them.

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13. *Injuries of the Bones in Children.** We have seen several instances where the bones of children were *bent* by external violence, and some deformity produced from the nature of the accident not being properly understood. In such cases there is no crepitus nor actual fracture, yet they require the same management as fractures. This accident has been noticed by Boyer, Aitkin, Underwood, and some others, but the treatment has not been pointed out. It most frequently occurs in the bones of the fore-arm, in children of two, four, or six years of age. The symptoms are, pain and loss of power in a limb—a preternatural curve, which can be diminished or increased at pleasure, the bones, when straightened, however, having a disposition to return to their flexed position, unattended by any crepitus, or that circumscribed projection which a displaced fragment of bone produces. The proper treatment is to straighten the limb, and apply splints, in the same manner as in a common fracture.

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* Dr. Barton—*Amer. Med. Recorder, vol.* iv

14. *Secale Cornutum.** In a late number of our esteemed cotemporary, the American Medical Recorder, Dr. Atlee of Philadelphia renews the attention of his professional brethren to the *ergot*, or *spurred rye*, considered by Dr. Tully, who has written largely on the subject, to be a *parasitic fungus*, like the different sorts of blight, smut, &c. This medicine appears to exert a specific power on the uterus, causing and increasing the contractions of that organ, not only when there is a predisposition to action therein, but when a relaxed state of it requires that these contractions should be excited. Dr. Atlee's experience enables him to subscribe to the following indications for its use, viz.

"1. In the early stages of pregnancy, when abortion threatens, and has withstood the usual remedies of venesection, opiates, internal and external refrigerants and styptics, when the hæmorrhage is alarming, and the contraction of the uterus feeble.

"2. In cases of hæmorrhage near the end of gestation, when contractions have either not taken place, or are too weak to be effectual.

"3. In lingering labours, connected with the death of the child, or in such as are rendered so by a cessation of contraction, the os uteri being well dilated, and a proper relaxation of the other soft parts existing." 142.

A case occurred to our author where the labour had so far advanced that the membranes were ruptured, when the pains entirely ceased, and did not return during the whole night. The ergot was now administered in the dose of a scruple; and in half an hour afterward she was delivered. He thinks this medicine essentially useful in labours rendered difficult by the too great comparative size of the head, or narrowness of the pelvis not amounting to deformity, and where the pains, though powerful, only serve to push the elongated scalp into the interior strait, where it may rest for hours, and ultimately require the forceps.

In uterine hæmorrhage, our author has exhibited this medicine with much success. In a peculiar condition of the uterus also, which sometimes takes place, *post partum*, namely, a torpor of the organ after difficult labour, preventing the contraction of its fibres, the womb remaining for hours, or even days, distended, hard, and attended with painful cramps, the ergot gave quick relief.

In a subsequent number of the same Journal Dr. Shallcross has inserted a paper on the efficacy of ergot in uterine hæmorrhages. He observes that—

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* Dr. Atlee of Philadelphia. Dr. Shallcross.

"The effect of ergot in exciting unremitting contraction in the uterine fibres, renders its agency peculiarly suitable to cases of uterine hæmorrhage, which are generally produced by a partial separation of the placenta. The circulation of the blood through the vessels of the uterus, is impeded during the continuance of contraction, and the reciprocal pressure of the placenta on the child and parietes of the uterus, will favour coagulation in the orifices of the bleeding vessels." 219.

The first case which he details was that of a woman in the 42d year of her age, and in the ninth month of her fifth pregnancy. The flooding had commenced, without apparent cause, three hours before Dr. S. arrived, and was still considerable. Her strength was much exhausted, and the undilated state of the os uteri formed an objection to the introduction of the hand to effect delivery by the feet.

"The plan adopted was as follows: The woman was placed in the best possible position to preserve her from syncope, and the vagina stuffed with some soft tow and part of a flag handkerchief —one scruple of ergot was then administered in substance. In fifteen minutes the pains, which had before been slight and irregular, came on with considerable energy; the substances placed in the vagina were now carefully removed; the os uteri was found about the size of half a dollar, with its edges thin and the membranes spread tense over it. With a view to accelerate the delivery, the membranes were pierced and the liquor amnii discharged; and in thirty minutes the child was born. There was no fresh hæmorrhage after the membranes were ruptured, nor in the delivery of the secundines. On the surface of the placenta were two clots of firmly coagulated blood, the size of an egg flattened. The death of the child in this case cannot be attributed to any agency of the ergot." 220.

We have not space to extract more cases or observations. The foregoing will be sufficient to excite attention to the secale cornutum.

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15. *Vacuity of Arteries, post mortem.** It was the opinion of Harvey, and his followers, until very recently, that the blood is circulated by the combined agency of the heart and arteries; and that the heart continues to propel blood in the last struggles of life, after it has ceased to receive it. Mr. Ker, of Aberdeen, has, in a late publication, denied the doctrine of the circulation altogether, and become the strenu-

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* Dr. Carson.

ous advocate of the opinions of the ancient physiologists. Dr. Carson's theory of the motion of the blood has been some time before the public, and a full explanation of it may be seen in the first volume of the Medico-Chirurg. Journal and Review, page 515. In the second volume of the same Review, our readers will also find some illustration of this subject by Dr. James Johnson, in a correspondence with the elder Dr. Parry, at page 358.

In the present paper, Dr. Carson has published some experiments on animals to prove—

"That the difference of the distribution of the blood after death from that in which, according to the Harveian theory, it must exist in the living system, arises chiefly from the elastic power of the lungs; and that the emptiness of the arteries and of the smaller vessels observed after death, admits of a satisfactory explanation from the supposed operation of this cause, combined with that of the elasticity of the arterial canals." *Med. Chir. Trans. Vol.* xi. *p.* 180.

In these experiments the collapse of the lungs was effected by making an opening through the muscular part of the diaphragm on each side, which was accompanied with the sound of air rushing through the orifices, and followed by speedy death. The vessels of the intestines, stomach, and mesentery, were very distinct and full of blood. The flesh was remarkably red, and, when cut into, bled. The heart and vessels about it contained only a moderate quantity of blood. A part of the descending aorta, above the iliac bifurcation, after its extremities had been secured, was cut out, and found to contain a small cylinder of blood generally coagulated.

These appearances are not exclusively the result of experiment; they have been met with after sudden death occasioned by an epileptic paroxysm. In the medical observations and inquiries will be found an instance of this kind related by Dr. W. Johnstone, in which the left ventricle and the aorta were found on dissection to contain nearly as much blood as the right ventricle and the cavæ. The sinuses of the brain were nearly empty, and the arteries were so turgid, that the drops of blood, which came out in great abundance, upon cutting into the substance of the brain, were also larger than usual. Dr. J. observes that Dr. Short had known a rupture of the left ventricle produced by the violence of an epilepsy. In Dr. Johnstone's case the lungs were of their natural colour and spongy; and the hands and feet were of an intensely livid colour, while every other external part of the body was pale. Hence he supposed that the congestion of the arterial system arose from the

pressure of the convulsed muscles, or a spasm of the arteriolæ minimæ. In the works of Bonetus and Morgagni are also to be found instances of aortal congestion and of coagula, formerly called polypi, in the left ventricle; while the right heart, and the cavæ, were comparatively collapsed.

We admire Dr. Carson's theory of the circulation, and think that the society have shown their judgment in publishing his paper, which will be an acceptable treat to the profession. His physiological researches have stamped a credit on his zeal and talents, which will ensure the good opinion of his medical friends and the confidence of the public; and we are happy to find him placed in a situation, where his abilities will not fail to be duly appreciated.

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16. *Obscure Uterine Disease.** A married woman 45 years of age, had never borne children, but evinced no sign of uterine obstruction till about two years previous to her final illness. In 1817 Dr. Mitchell was consulted, in consequence of the discharge of an obstinate fluor albus having become of a pink colour. This yielded at length to the tincture of lytta. The lady now enjoyed good health for a considerable time. In 1820 she discovered a hard tumour in the right iliac region, which she neglected to make known for several months.

"She was frequently seized suddenly with severe paroxysms of pain in the region of the uterus, attended with vomiting, breathlessness, numbness of the right thigh, and much difficulty in voiding the contents of the bladder and intestines." *Med. Recorder, p.* 137.

False delicacy prevented an examination, per vaginam, till a short time before her death. Before the tumour had advanced much in magnitude, evident relief was obtained by rest in the recumbent posture. The appetite was generally defective. In the intervals she had tolerably good health and spirits. Her last paroxysm lasted two weeks, and had been brought on by exposure to wet.

"Her nights as well as her days, were restless, her whole frame was racked with pain, her stomach almost incessantly contracted with fruitless efforts at evacuation, and the soft parts in the lumbar region burning with a heat that nothing could alleviate. Towards the closing scene, she was occasionally delirious, and on the day

* Dr. Mitchell, of Philadelphia.—*Med. Recorder*, No. 13

preceding her death, became so exhausted as to be unable to converse, or help herself in bed. This exhaustion, however, was attended with considerable mitigation of suffering, and gave to her last hours comparative ease. About an hour before she died, she was conscious of something bursting within her, after which the tumefaction extended to the epigastric region, increasing the vomitive efforts, and breathlessness, and finally terminating in death." 137.

Such is the history of the disease; and as no dissection was permitted, the exact nature of it must be a matter of conjecture. The only medicines that gave any alleviation was a diuretic, in which squill and iron formed the principal ingredients. Externally hot spirituous fomentations were also serviceable. Two days before death an examination, *per vaginam*, was permitted; but this only rendered the disease more obscure, in the eyes of the medical attendants.

"Low down in the vagina, was felt a large round tumour of great firmness, pressed down into the pelvis almost as firmly as the head of a child in the advanced stage of labour. This was of course the uterus, but the os tincæ was altogether wanting. It appeared to me a firm tumour or thick sac filled with some sort of matter, but having not the smallest aperture. On passing the finger up towards the right os ilium, it was resisted by what appeared to be adhesion of the tumour; on the left side, the finger could be passed rather higher up." 139.

The result of this examination was a belief that the disease was either an enlargement of the uterus, or that it was "converted into a thick tight sac containing blood, pus, or

continued in this state for about a month, with little or no variation, when he was suddenly seized with a violent pain in the superior part of the rectus abdominis muscle, extending down to the umbilicus, and inclining to the left side. In consequence of the violently spasmodic affection of this muscle, a variety of anti-spasmodic medicines were directed, but with very inconsiderable advantage. Blood-letting, warm bathing, &c. were productive of no better effect. It may be proper to state, that this gentleman had, for several years, suffered occasionally from a rheumatic affection of the right leg, thigh, and hip, which had produced considerable lameness, and greatly impaired his general health. The disease under which he now laboured, was thought to be of the same nature; and as all the ordinary remedies had failed in affording alleviation to his distress, he was advised to try the effect of sea-bathing. This remedy was faithfully had recourse to, but without any advantage to the local affection, or any improvement to his general health. He was gradually exhausted by this continual irritation, and died on the 30th of August, 1820." *Med. Rec.* 152.

On dissection, an ulcer was found in the stomach, "about three inches in diameter, the edges of which were high and much jagged." Intus-susception was found in several portions of the intestinal canal.

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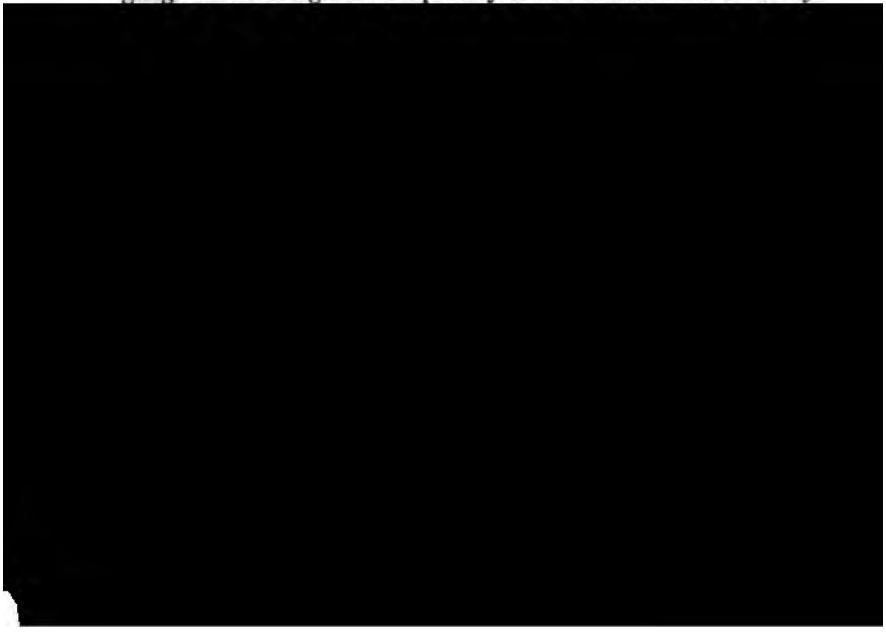
18. *Panckouckeric.* We have always ceded the palm of victory, in respect to fertility of invention to our Gallic neighbours. A Parisian bibliopolist, M. Panckoucke, has lately outstripped all competitors in the art of picking the pockets of the public throughout Europe, and that with their eyes open, and in the broad face of day! Some ten or fifteen years ago this gentleman issued the prospectus of a Dictionary of Medical Sciences, edited by the most eminent men of the age, and which was to be composed of choice and select monographs, containing all that was good, and rejecting all that was false or doubtful in medical science and literature. What a delightful prospect! Every one opened his purse, and subscribed his twelve francs in advance. The work was to be comprised in twelve volumes —but as that was found insufficient, 18 volumes were to be the extent. Arrived at this limit, they had only got to the letter G. Well! 24 volumes would certainly finish. But the 24th volume only got two letters beyond the 18th!! In short, we have now 53 volumes, and we have only got to the letter S! But this is the least of the evil. This immense tree must push out branches corresponding to the trunk. Accordingly we have an extra series of Flora's, amounting already to 90 numbers: and to make the Flora

complete, we must have an "*iconography*," of 17 numbers to give employment to the pretty fingers of Mrs. and the Misses Panckoucke! This subject being likely to fail, another branch or series was invented—*biography*, which will occupy 12 or 14 volumes extra! But the *chef d'ouvre* of invention still remained. Other dictionaries contain but 24 letters. M. Panckoucke seized, with delight, on the *et cetera*, which is to have *no end!* The *Journal Complementaire des Sciences Medicales* is to form a tail to this literary comet, which is to blaze along the horizon, *per omnia secula seculorum.*

Still M. Panckoucke is not content. He has swelled out the Dictionary with a chaotic mass of useless and heterogeneous materials, among which a valuable article here and there is studded. He now is going to publish an *abridgment* of the whole work—not a selection of the good from the bad, but an indiscriminate *rasée* of each article; so that in the abridgment there will be nothing good to compensate for the trash.

Our friend, Dr. Ducamp, of Paris, has exposed, with great humour and truth, this literary pick-pocket, in the February number of the *Journal General de Medecine;* and we take this opportunity to warn our brethren on this side of the channel against such unprincipled speculators.

Our readers are all aware that we take every opportunity of diffusing any valuable information which we find in the above work (and there are numerous sterling monographs) among the profession in this country, for the size and language of the original completely check its circulation in any



reward, however, for Sir William Adams's four years' service in the Ophthalmic Hospital, the committee have recommended that the sum of four thousand pounds be granted him. We have understood that this sum is not above a tenth of what Sir William expected. But let him thank God and Lord Palmerston for what he has got!

We are informed that Sir William Adams stated to the committee that, as the whole of the medical periodical press of this country was conducted by, or under the influence of physicians and surgeons belonging to His Majesty's service, so his works were all misrepresented, and their extraordinary merits kept back from the public. All we shall remark on this is, that it is a desperate bad cause which requires mis-statements to support it. That pre-eminent medical talents, in all ages and countries, have been assailed by envy and jealousy, the history of illustrious individuals too fully proves; but we believe there is no instance on record where a general combination has been raised against any professional character, without the most solid grounds for such proceedings. In the present frame and constitution of society, it is morally impossible that such a combination should take place, and therefore Sir William Adams, in our humble opinion, acts a very impolitic part in making use of such a defence.

We can disprove Sir William Adams's statement by an appeal to facts which are within the view of all our readers. We gave a full and favourable analytical review of Sir William's work on Cataract, in the second volume of this Journal, long after the controversy between the army and himself had commenced; and still more recently we reviewed his work on artificial pupil, at the same time with that written by Mr. Guthrie, without making the slightest allusion to the controversy, or suffering ourselves to be influenced, in the most remote degree, by any feelings hostile to this man, who casts such a sweeping reflection on the whole periodical press. We leave Sir William Adams to reconcile these *facts* with his *assertions*, if he has any regard to *professional* opinion, which we firmly believe he *has not*—excepting as far as his own pecuniary interest is concerned. Sooner or later, Sir William Adams will find that the conduct which secures the esteem of his professional brethren is that which will most effectually and permanently contribute to his prosperity, as well as happiness. At present, he will, of course, laugh at us as not being "men of the world;" but let him bear in mind the words of a celebrated ancient—"mark the end."

20. *Masked and Periodical Intermittents.** Many of the enthusiastic followers of Broussais would appear to reject the agency of the *nerves*, or at least the state of *spasm* as an item in the proximate causes of disease. According to their doctrine, the *scalpel* alone is necessary in unravelling the intricacies of pathology—while leeches and low diet form the sum total of therapeutics. This is striking out a nearer cut to the summit of the hill of science than Brown ever dreamt of. In all ages and countries, physicians employed the lancet and other antiphlogistic measures, when they were indicated by the phenomena present, and before the light of morbid anatomy had risen on the horizon of medicine. But in all ages and countries, on the other hand, observation demonstrated that there was another class of diseases which could not be called, or treated as, *inflammation*, and which were obviously referrible to a state of the nervous system which, for want of a better, has been given the term of *irritation*. And if these affections of the nervous system were recognised in the earlier periods of civilization, they are still more numerous now, when the habits, moral and physical, of mankind, tend particularly to their multiplication.

But the Broussaians point to the numerous cases of recovery from (supposed) gastritis, or gastro-enteritis, by the application of leeches to the epigastrium or abdomen. Yet men who do not ride a hobby-horse will answer, that many of these pretended phlogoses were only states of irritation or spasm, which would have got well by quiet, low diet, and gentle means, had leeches never been applied:—that the

that they are not without foundation in reason and fact. We shall now proceed to some of the cases which our author has laid before the public.

Case 1. A young man, after a hearty supper, was seized next morning with vomiting of bile and aliments swallowed. Every evening afterward he was attacked with feverish symptoms, and such a violent pain in his neck that one night he attempted to wound himself with a cutting instrument, his tortures were so insupportable; yet there was no appearance of swelling or redness inside or outside of the throat. After the paroxysm, the patient was left weak, the pulse small, the countenance pale, and the features altered. The Peruvian bark and valerian soon put an end both to the fever and local pain. These medicines, however, were assisted by nitre, camphor, and opium, the skin having once or twice become constricted, and the nervous system irritable, till the latter remedies were used.

Case 2. A youth, 13 years of age, having danced rather too long at a ball, was seized with shiverings, and a tremulous motion of the lower extremities, which lasted about an hour, and then left him in perfect health. Next day, at the same hour, the same kind of paroxysm returned; but the agitation of the limbs was very violent. A slight headach and trifling chills preceded the convulsive movements of the lower extremities. After an hour's duration the fit vanished as before, and left him without ailment. Bark, valerian, and camphor, were now given in the intervals of the paroxysms, but only with the effect of rendering them later in their accession. On the 21st day the bark was abandoned, and some trifling means were used, but the disease became aggravated, and accompanied with convulsive movements of the whole body. The bark, camphor, and valerian, again exhibited; and the succeeding paroxysm shorter and weaker. The next only lasted ten minutes, and the third four. There was no return for ten days, at the expiration of which the paroxysms was renewed, and again controlled by the same means. But the boy peremptorily refused to swallow any more bark, and the paroxysms, though gradually lessening in force and duration, assailed him every day for three months, when Nature triumphed over the disease.

Among the prejudices which our continental brethren cherish, and indeed pride themselves upon, is that of not administering arsenic—because, forsooth, it is a *poison*. If you ask them what bad effects they have *seen* result from

its administration? they answer, that it *must* have bad effects from analogy, and therefore there is no occasion to try it. These are precisely the arguments they urge against purgatives—and particularly calomel purgatives, in peritoneal inflammation. They *must* irritate and inflame the bowels, and therefore they will not try such dangerous remedies.

Case 3. We shall only quote, or rather abridge, another case from M. Comte.

Master V——, aged 19, after bathing in a river several times, in the summer of 1820, was taken with malaise, sleeplessness, agitation, and convulsive movements in all his limbs, which continued for a fortnight, and yet without loss of appetite. A pain took place in the left side, which was removed by leeches; but subsequently returned, though in a less degree, in both sides. On the 26th of August, after a good forenoon, he was seized in the evening with chills, violent headach, delirium, extreme restlessness, and convulsive movements in the muscles of the face. In this state he jumped out of bed, upsetting and breaking every thing that came in his way, four men being hardly sufficient to secure him again in his bed. 27th, Quite well, appetite good; but in the evening a similar paroxysm as on the preceding day, but accompanied this time with a difficulty of respiration, threatening suffocation. These symptoms all subsided without medicine, for some etherial antispasmodics only aggravated them. Bark and valerian were now prescribed in the intermissions. But the paroxysms returned with as

20. *General Phlebitis and partial Arteritis.** Modern pathology has lately directed its researches, with zeal as well as profit, to derangements of the vascular and nervous systems. Every day we become more and more acquainted with the causes of symptoms and the seats of disease. This is surely the right road to successful therapeutics. Facts, however, and accurate observations, under the existing regime of pathology, are wanted, and must be carefully recorded for centuries to come, before our science shall approach to any thing like certainty.

In the greater number of cases that are on record of the inflammation of veins, the causes have been *external;* but we believe the following presents the most extensive phlebitis, from a general or constitutional cause, that is to be found in the writings of modern physicians.

The patient was a batchelor, 38 years of age, who was seized, after a moderate fever, with distinct variola, on the 15th March, which ran its course regularly and mildly. During the eruption, the patient found himself so well, that he did not observe a sufficiently strict regimen in respect to food.

On the 22d March, the tenth day of the disease, the eruption being in full suppuration, the patient experienced, without any apparent cause, a general indisposition. He felt weak and fatigued—his limbs heavy and aching—his tongue yellow and coated—the breathing short—the pulse quick and hard. Hitherto he had taken nothing but ptisans. He was ordered a vomit. He only brought up some potatoes on which he had supped. From the 22d to the 25th, he continued in much the same state, the variola running its phases, but the pustules becoming rather flatter than is usual, and the areolæ of a dull red colour. The fever, though mild, persisted, and was accompanied with watching, and pains in various parts of the body. The appetite was entirely gone, the tongue foul, the breath fetid. On the evening of this day, he complained of an indefinable sense of sinking and lassitude. The eye exhibited a peculiar expression of dejection and suffering. The pains in the arms, thighs, and joints, now became so excruciating that the patient could not rest an instant in one position. He was excessively apprehensive for the night—thirst inextinguishable—tongue brown and dry—breath very offensive—pulse very wiry. At two o'clock in the morning the agitation declined—he ceased to complain, and, at six o'clock, expired.

Necroscopia. The variolous eruption entirely dried up—œdema of the right upper and left inferior extremity—a small suppurated phlegmon on the left elbow. *Head.* The arachnoid vessels much injected, a gelatinous layer spread over the right hemisphere of the

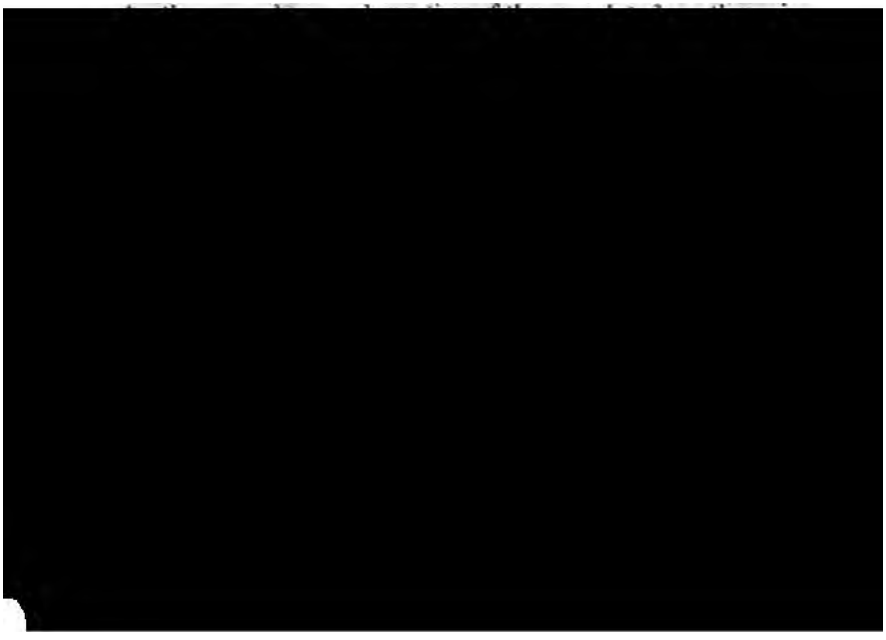
* Dr. Fallot. *Journ. Comp. July*, 1821.

brain—brain itself sound—no fluid in the ventricles. *Thorax.* The lungs gorged with black, fluid, and watery blood—mucous membrane of the bronchia and trachea injected. *Abdomen.* The peritoneum healthy—liver enlarged, and gorged with black blood—gastro-intestinal mucous membrane healthy. *Vascular System.* Heart of natural size and appearance externally—internal surface of cavities intensely inflamed throughout, but more so in the right than left chambers—the arches of the aorta and pulmonary artery finely injected with blood—the pulmonary artery and veins of a deep purple red colour, as far as they could be traced—the internal tunic of the aorta, as far as the arch, was of the same colour; from thence the tint got lighter and lighter, until it became extinct. The inner membrane of the coronary arteries was inflamed throughout their extent. The interior tunic of the venous system was not only inflamed, but also thickened wherever it was traced. The inflammation too, increased as the vessels receded from the heart—the branches being most, and the trunks of the veins least, inflamed. No washing, sponging, or even scraping with the scalpel could remove this inflammatory appearance. The lymphatic vessels were not affected.

M. Therion, a young eleve of the faculty of Liege, did not leave the body until he had opened almost every ramification of the vessels, of which he made some beautiful drawings. We need not remark on the inertness of the practice in this case, because it is not likely that any treatment would have succeeded.

XVI.

EXTRA LIMITES.



favourable opportunity has presented itself of making a further application to the Legislature.

Parliament is very wisely jealous of making enactments at the suggestions of petitioners, who may be actuated by motives of private advantage, rather than by a desire to benefit the public, and it is not to be expected, the House of Commons having rejected the surgeons' bill on grounds which seem to prove their unacquaintance with the real merits of the question, that Parliament will be at present disposed to grant any effectual relief for the imperfections of the apothecaries' act; nevertheless, your committee is firmly persuaded that in no long time, through the measures adopted, such a mass of evidence will be collected and arranged as will convince the public of the mischiefs and mortalities that are continually happening, from confiding the treatment of difficult, and even dangerous, diseases to ignorant and uneducated persons; and of the absolute necessity thence arising, of resorting to legislative precautions as the only adequate remedies.

Convinced that such is the true state of the case, your Committee has exerted itself to collect evidence at once strictly correct, clear, and decisive; and, in obedience to the 16th and 17th resolutions of the last annual meeting, circular letters have been sent into every quarter in which the Society has influence, requesting the practitioners therein resident to transmit to the Secretary of this Society all cases of gross mal-practice that occur within their knowledge, and which admit of being duly substantiated; in order that they may be forwarded to the Society of Apothecaries, whose ready attention, and vigorous co-operation, with the views of the Association, your Committee thankfully acknowledges; and of which it has every reason to expect a continuance. Various communications have already been received, especially from Lancashire, stating the gross ignorance and palpable misconduct of persons who, without education, or learning, or study of any kind, have yet had the assurance to practise medicine. Your Committee earnestly hopes that, under the Apothecaries' Act, some example may be made of such unprincipled offenders, and that the same salutary consequences will every where result from their exposure as followed the well-known trial and conviction which took place in Staffordshire, in the year 1819.

The Committee cannot refrain here from expressing its marked approbation of the intelligence and activity which characterize the practitioners in the last-mentioned county; abundantly shown in their correspondence with this committee, in the establishment of a medical and surgical library, and in the still increasing numbers of their members; there being no fewer than one hundred and thirty gentlemen resident in that county, who belong to this association.

The 15th resolution of the last general meeting recommended to the Committee, to take into consideration the 28th clause of the Apothecaries' Act; with a view to the removal of certain practices which prevail to the great injury of the profession, under the supposed sanction of that act.

After repeated and lengthened discussions on the subject, your

brain—brain itself sound—no fluid in the ventricles. *Thorax.* The lungs gorged with black, fluid, and watery blood—mucous membrane of the bronchia and trachea injected. *Abdomen.* The peritoneum healthy—liver enlarged, and gorged with black blood—gastro-intestinal mucous membrane healthy. *Vascular System.* Heart of natural size and appearance externally—internal surface of cavities intensely inflamed throughout, but more so in the right than left chambers—the arches of the aorta and pulmonary artery finely injected with blood—the pulmonary artery and veins of a deep purple red colour, as far as they could be traced—the internal tunic of the aorta, as far as the arch, was of the same colour; from thence the tint got lighter and lighter, until it became extinct. The inner membrane of the coronary arteries was inflamed throughout their extent. The interior tunic of the venous system was not only inflamed, but also thickened wherever it was traced. The inflammation too, increased as the vessels receded from the heart—the branches being most, and the trunks of the veins least, inflamed. No washing, sponging, or even scraping with the scalpel could remove this inflammatory appearance. The lymphatic vessels were not affected.

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XVI.

EXTRA LIMITES.

At the annual general meeting of the associated apothecaries and Surgeon-apothecaries of England and Wales, held by public advertisement, at the Crown and Anchor Tavern, Strand, July 4, 1821—Joseph Hays, Esq. President;

The following Report from the General Committee was read, viz.—

In conformity with its duty to the Association, and with the laudable custom that has hitherto prevailed, the Committee respectfully submits to the general meeting its annual Report.

It would have been extremely gratifying to all its members could your committee have announced the attainment of that important object which has been so long, and so ardently desired, viz. a legislative provision against the mal-practices of illiterate individuals, who, under usurped titles, carry on the practice of medicine equally to the dishonour of a liberal profession, and to the injury of the community at large. But the Committee still feels that neither House of Parliament is sufficiently aware of the evils which result from the present state of medical practice, as to be convinced of the necessity for a change. It can only regret, therefore, that during the last year no

Committee regrets to state, that until the act referred to shall itself undergo the revision and amendment of which it stands so much in need, no hope can be entertained of instituting and enforcing any effectual remedy for the evils alluded to.

Nevertheless, a new act may be so framed as to meet the difficulties which arise from the ambiguity of that clause, and to restrain at least from prescribing for diseases and practising medicine, all those who, by a regular attendance on the schools of medicine, and a subsequent examination before competent authorities, shall not have proved themselves qualified for these important offices. Of a new act such a restrictive clause would undoubtedly form a prominent and even essential part.

In furtherance of the same objects, the Committee has laboured to carry into effect the 18th resolution of the last annual meeting, by the volume of transactions which, under the sanction of this meeting, the Committee especially appointed for that purpose, will shortly have the honour to lay before the public; they hope to show that whilst the work contains valuable papers from individuals in every branch of the profession, part of its details will point out the prevalence and evil tendency of ignorance in those who practise the medical art, without having been properly instructed; and the remainder of the volume evinces the advantage of a systematic education of every medical man. Your Committee, believing that the attainment of these objects for which the Society has been formed will be greatly expedited by the periodical publication of similar volumes of transactions, and feeling proportionally anxious to circulate the present collection as generally as possible, among the members of the Society; therefore suggests, that such of them as may agree to subscribe for the work, shall receive copies at as nearly as possible its cost price; and that the remaining copies of the work shall be sold to the public at such a price as shall bring

BIBLIOGRAPHICAL RECORD;

OR

Works received for Review, within the Quarter.

1. Principes Generaux de Physiologie-Pathologique, coordonnés d'apres la doctrine de M. Broussais. Par. L. J. Begin, Chirurgien Aide-Major a l'Hopital Militaire d'Instruction, &c. 1 tom. 8vo. pp. 390, 1820.

Through Dr. Breschet.

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2. Refutation des Objections, Faites, a la Nouvelle Doctrine des Fievres; ou de la Non-existence des Fievres Essentiales. Par Louis Charles Roche, M.D. One vol. 8vo. pp. 168. Paris, 1821.

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3. Journal General de Medecine, for December, 1820, and January, February, and March, 1821, in exchange for *Medico-Chirurgical Review.*

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4. A Physiological Essay on the Sensibility of Animals; being the first part of a Series of Inquiries on the Nature of Life. By G——— W———. Octavo, sewed, pp. 40. London, 1820.

☞ *This little pamphlet contains many ingenious views and sensible reflections on several physiological subjects. We cordially agree with the author in the following sentiment, which concludes the pamphlet; "An apparent correct idea of death may be drawn from this theory of life, by considering it a loss of relation between a soul and the laws of this natural world. And all reasoning upon the soul's immortality may be suffered to rest on the admission of its indestructible nature, with reliance upon the Supreme Power for a re-establishment of a relation between it and the laws of some other, it is to be hoped, happy abode."* 39.

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5. Journal de Physiologie Experimentale. Par F. Magendie, M. D. No. 2, April, and No. 3, July, 1821.

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6. The New England Journal of Medicine and Surgery, and collateral Branches of Science. Conducted by a number of Physicians. Nos. 1 and 2 of vol. x. for January and April, 1821.

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7. Practical Remarks on disordered States of the Cerebral Structures, occurring in infants. By Whitlock Nicholl, M. D. M. R. I. A. F. L. S. &c. Small octavo, pp. 94. London, 1821.

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8. The History of Plague, as it has lately appeared in the Islands of Malta, Gozo, Corfu, Cephalonia, &c. detailing important facts, illustrative of the specific Contagion of that Disease, with particulars of the means adopted

for its eradication. By J. D. Tully, Esq. Surgeon to the Forces, Member of the Ionian Academy, late Inspector of Quarantine, and President of the Board of Health of the Ionian Islands. One vol. 8vo. pp. 292. London, 1821.

☞ *The author, who has resided many years in plague countries, and was an eye witness of the disease, and of the salutary regulations put in force to check it, has adduced the most incontrovertible evidence of the specific contagion of plague. The work should be in the hands of all medical and other officers about to visit those countries where the disease is prevalent, and to these in particular we recommend it. We hope soon to exhibit an analytical view of its contents in this Journal.*

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9. A Supplement to the Pharmacopœia: being a Treatise on Pharmacology in general; including not only the drugs and compounds which are used by practitioners of medicine, but also those which are sold by chymists, druggists, and herbalists, for other purposes; together with a collection of the most useful medical formulæ, an explanation of the contractions used by physicians and druggists; the medical arrangement of the articles of the London Pharmacopœia, with their doses at one view; a similar list of the Indigenous Plants of the British Islands, which are capable of being used in medicine, &c. also a very copious Index, English and Latin, of the various names by which the articles have been known at different periods. *A new and improved edition, considerably enlarged.* By Samuel Frederick Gray, Lecturer on the Materia, Pharmaceutical Chymistry, and Botany. One closely printed volume, octavo, pp. 600. London, 1821.

☞ *The rapid sale of the former editions proves the sanction of the public, and the increase of matter in the present, must render it still most acceptable to the profession.*

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10. A Conspectus of the Pharmacopœias of the London, Edinburgh, and Dublin Colleges of Physicians; being a practical Compendium of Materia Medica and Pharmacy. By A. T. Thomson, F. L. S. &c. &c. &c. One vol. duodecimo, pp. 168. London, 1820.

☞ *This is the most useful vade-mecum for the pocket or desk of practitioners of all ranks, that exists in the English or any other language.*

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11. Observations on some of the general Principles and on the particular Nature and Treatment of the different Species of inflammation; being, with additions, the substance of an Essay to which the Jacksonian Prize, for the year 1818, was adjudged by the Royal College of Surgeons. By J. H. James, Surgeon to the Devon and Exeter Hospital, and Consulting Surgeon to the Exeter Dispensary. One vol. 8vo. pp. 328. London, 1821.

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12. Essays on Hypochondriasis, and other Nervous Affections. By John Reid, M. D. Member of the Royal College of Physicians, London; and late Physician to the Finsbury Dispensary. The *second* edition, with considerable additions. One volume, 8vo. pp. 440. London, June, 1821.

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13. Practical Illustrations of Typhus Fever, &c. By John Armstrong, M. D. Republished in Philadelphia, with Notes, critical and explanatory, by Nathaniel Potter, M. D. Octavo, pp. 468. Philadelphia, 1821.

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14. American Medical Recorder. Nos. 13 and 14. for Jan. and April. 1821

15. [From the Publishers.] A Treatise on the Hydrocephalus Acutus, or Inflammatory Water in the Head. By L. A. Golis, of Vienna. Translated from the German, by Robert Gooch, M. D. One vol. octavo, pp. 280. London, 1821.

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16. A Treatise on the Nature and Treatment of Scrofula; describing its connexion with Diseases of the Spine, Joints, Eyes, Glands, &c. &c. founded on an Essay to which the Jacksonian Prize, for the year 1818, was adjudged by the Royal College of Surgeons. To which is added, a brief Account of the Ophthalmia, so long prevalent in Christ's Hospital. By Eusebius Arthur Lloyd, Member of the Royal College of Surgeons in London, Senior Surgeon to the General Dispensary, Aldersgate-Street, and late House-Surgeon to St. Bartholomew's Hospital. One vol. 8vo. 330 pages. London, 1821.

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17. A Series of Lectures on the most approved Principles and Practice of Modern Surgery; principally derived from the Lectures delivered by Sir Astley Cooper, Bt. F.R.S. &c. &c. at the united Hospitals of Guy and St. Thomas, and in which will be found some of the opinions of the most celebrated surgeons, from the time of Hunter to the present moment: interspersed with numerous cases. By Charles William Jones. *Second Edition.* By Charles Mingay Syder, Surgeon. One vol. 8vo. pp. 448, small type. London, 1821.

☞ *This new edition is dedicated (by permission) to the eminent Baronet from whose lectures it was originally taken. It now comes, therefore, in a more authentic shape than before, and will undoubtedly attract considerable attention in the surgical world, as containing the opinions and practices of perhaps the first surgeon of the age in which we live. We have reason to believe that the original writer took down the ideas of Sir Astley Cooper's lectures, but not always correctly, and with little regard to order or language. Yet with these imperfections, the work will be found an invaluable repository of surgical knowledge.*

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18. The Accoucheur's *Vade Mecum*. By John Hopkins, M. D. Physician Extraordinary to Her Royal Highness the Dutchess of Kent's Household, and Physician-Accoucheur to the Westminster Lying-in Institution. In two volumes, duodecimo, 464 pages, *seventh edition*. London, 1820.

☞ *Of a* seventh *edition it would be impertinent to obtrude an opinion. The work is dedicated to Sir Henry Halford, Bart. the dignified President of the Royal College of Physicians, and contains the result of* fifty-six *years' practice. This is no trifling recommendation.*

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19. A Series of Questions and Answers, for the Use of Gentlemen preparing for their examination at Apothecaries' Hall; with copious and useful Tables annexed. By Charles Mingay Syder, Licentiate of the Honourable Society of Apothecaries, &c. Duodecimo, 126 pages. London, 1821.

☞ *This is the only work which we have seen for the purpose of preparing gentlemen for Apothecaries' Hall, in the shape of Questions and Answers. We look upon it as very well adapted to the object designed.*

---

20. A Treatise on the Mineral Water of Askern, including a Description of the Village, History of the Spaw, &c. By T. Le Gay Brewerton, Licentiate of the Royal College of Surgeons, and Fellow of the Royal Physical Society, Edinburgh. One vol. 8vo. pp. 144.

☞ *Some account of this little volume shortly.*]

21. The Scourge of Venus and Mercury, represented in a Treatise of the Venereal Disease; giving a succinct account of the Nature, Causes, and Symptoms of that dreadful Distemper; *and the fatal consequences arising from Mercurial Cures.* Unto which is added, the *true way* of curing (without a particle of mercury) not only the *consummate* and *inveterate*, but also the *mercurial Pox;* found to be more dangerous than the Pox itself By S. SINTELAER, Practitioner in Physic. Octavo, pp. 363. London, 1709.

☞ *We return Dr. Dougal Campbell our thanks for this curious volume, containing most of the* MODERN *mercurial and anti-mercurial discoveries. We hope to give some amusing extracts from it in our next number.*

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22. Observations on Syphilis, principally with reference to the use of Mercury in that Disease. By JOHN BACOT, Member of the Royal College of Surgeons, and late Surgeon of the Grenadier Regiment of Guards. Octavo, pp. 115. London, 1821.

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23. Essays on the Female Economy. On the periodical Discharge of the Human Female; with new views of its Nature, Causes, and Influence on Disease; to which are added, Directions for its Management in the different Stages of Life, &c. &c. By John Power, M. D. Physician-Accoucheur to the Westminster Lying-in Institution, &c. One vol. 8vo. pp. 101, with a plate. London, 1821.

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24. A Treatise on Acupuncturation; being a Description of a Surgical Operation originally peculiar to the Japanese and Chinese, and by them denominated ZIN KING, now introduced into European practice, with directions for its performance, and Cases illustrating its success. BY JAMES MORSS CHURCHILL, Member of the Royal College of Surgeons in London. Octavo, pp. 86, with a plate of the instrument. London, 1821.

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25. The Principles of Forensic Medicine, systematically arranged, and applied to British practice. By JOHN GORDON SMITH, M. D. Octavo, pp. 503. London, 1821.

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26. An Essay on the Disorders and Treatment of the Teeth. By ELEAZAR PARMLY, Dentist. Small octavo, pp. 62. London, 1821.

☞ ***The author of this little volume, and his brother now in America, we know to be able and ingenious dentists. The present little volume contains perspicuous Directions for the Management of the Teeth, and sensible Observations on the Causes of their Decay***

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27. The Philadelphia Journal of the Medical and Physical Sciences. Edited by N. CHAPMAN, M. D. No. 3, May, 1821. Octavo, pp. 206.

☞ ***In acknowledging the receipt of the above, we beg to inform Dr Chapman that the Medico-Chirurgical Review shall be regularly forwarded in return. The fifth number, being the first of a volume, was transmitted by the hands of Professor Caldwell, last month.***

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28. A Practical Treatise on Ringworm of the Scalp, Scalled Head, and the other Species of Porrigo. By SAMUEL PLUMBE, Member of the Royal College of Surgeons of London, &c. Octavo, pp. 104, with a plate. London, 1821.

29. **The Physician's Guide; being a popular Dissertation on Fevers, Inflammations, and all diseases, connected with them; comprising observations on the Use and Abuse of Bloodletting, Mercury, Cathartics, Stimulants, Diet, &c. &c.** By ADAM DODS, M. D. Octavo. pp. 320. Worcester, 1821.

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30. **Examen des Doctrines Medicales et des Systemes de Nosologie; ouvrage dans lequel se trouve fondu l'examen de la doctrine medicale generalement adoptée, &c. precédé de propositions renferment la substance de la Medecine physiologique.** Par F. I. V. BROUSSAIS, &c. &c. Two vol. 8vo. pp. 874. Paris, 1821. Transmitted through Dr. Ducamp.

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31. **Memoir au Roi et son conseil des Ministres, et aux Chambres; ou protestation contre le Travail de la Commission Sanitaire, &c.** Par. M. JEAN DEVEZE, M. D. &c. &c. Quarto, pp. 33. Paris, 1821.

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32. **Analyse Chimique des Quinquina.** Par M. M. PELLETIER, et CAVENTOU, Suivie d'Observations Medicales sur l'Emploi de la Quinine et de la Cinchonine. Octavo, pp. 88. Paris, 1821.

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33. **Observations on the Nature and Treatment of the Fever prevailing in London, &c.** By ARCHIBALD M'DONNEL, Member of the Royal College of Surgeons, in London. Octavo, pp. 28. London, 1818.

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34. **A Treatise on the Anatomy and Physiology of the Mucous Membranes; with illustrative Pathological Observations. From the French of XAVIER BICHAT.** By JOSEPH HOULTON, Member of the Royal College of Surgeons in London. Octavo, pp. 100. London, 1821.

☞ *We are happy to see this little Treatise of the illustrious Bichat in an English dress. It well deserves, and will well repay, an attentive study of its important contents.*

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35. **Medical Dissertations on Hæmoptysis, or the Spitting of Blood, and on Suppuration;** which obtained the Boylston Premiums for the years 1818 and 1820. By JOHN WARE, M. D. Fellow of the Massachusetts Medical Society. Octavo, pp. 95. Boston, 1820.

☞ *We return Dr Ware our thanks for this little volume, which shall have due notice as soon as possible.*

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26. **Elements of Medical Logic, illustrated by Practical Proofs and Examples.** Second edition, with large additions, particularly in the practical part. By Sir GILBERT BLANE, Bart. &c. &c. Physician to the King. Octavo, pp. 280. London, August, 1821.

☞ *The First edition was reviewed in a former number of this Journal. The favourable reception which it has met with from the medical world, has induced this able and excellent author, as well from a sense of gratitude as duty, to use his best endeavours to render the present impression still more worthy of their acceptance. The work, as may readily be conceived, bears the stamp of profound thought, extensive erudition, and sound judgment. May this amiable and talented physician live to see many editions issue from the press, to roll down his name on the stream of time, as one of those who shone illustrious in the early part of the nineteenth century.*

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37. An Essay on the Medical Application of Electricity and Galvanism; with a concise descriptive Account of Disease. By JAMES PRICE, Surgeon. Member of the Royal College of Surgeons, late in His Majesty's Service &c. One vol. 8vo. pp 112. London, 1821

38. Observations on certain affections of the Head, commonly called Headaches; with a view to their more complete Elucidation, Prevention, and Cure. Together with some brief Remarks on Digestion and Indigestion. By JAMES FARMER, Member of the Royal College of Surgeons in London, and Licentiate of Midwifery of the Royal College of Physicians of Dublin. Duodecimo, pp. 88. London, 1821.

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39. A Treatise on Burns and Scalds: detailing the best methods of treating those accidents, as practised in the London Hospitals, and by the most celebrated medical practitioners. By JOHN AUGUSTISE WALLER, Surgeon, R. N. Octodecimo, pp. 61. London, 1821.

☞ *This little miniature volume presents portraits of, and some criticisms on, the Plans of Cleghorn, Earl, Kentish, &c.*

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40. Remarks on the Epidemic Yellow Fever, which has appeared, at intervals, on the South Coasts of Spain, since the year 1800. By ROBERT JACKSON, M. D. One vol. 8vo. pp. 207, 8s. boards. London, August, 1821.

☞ *This interesting little work is the result of the veteran, able, and zealous Dr. Jackson's personal researches, on the coasts alluded to. Only 250 copies are printed, and those at the author's own expense. We are sure our brethren will be eager to peruse this (perhaps last!) production from the pen of an indefatigable promoter of medical knowledge; and we can with great safety assert that the intrinsic merit of the work is such as to render it a rich treat to the profession. We shall show proof of this in our next number.*

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41. Researches into the Laws and Phenomena of Pestilence; including a Medical Sketch and Review of the Plague of London, in 1665; and Remarks on Quarantine. With an Appendix, containing Extracts and Observations relative to the Plagues of Morocco, Malta, Noya, and Corfu; being the subject of the Aniversary Oration, delivered before the Medical Society of London, in the spring of 1820, and published at their request. By THOMAS HANCOCK, M. D. Licentiate of the Royal College of Physicians, and Physician to the City and Finsbury Dispensaries. Octavo, pp. 378. London, July, 1821.

[redacted]

time intruded on, or his feelings harassed by private appeals. He considers himself as in no way responsible for individual criticisms in the Journal, but only as far as he respects propriety of language, expressions, and general conduct.

TO CORRESPONDENTS.

Dr. Crane's communication on *Bulimia Emetica* is received.

JUSTITIA is respectfully informed that we can never interfere with the conduct of other journalists towards authors or writers of papers in periodical works. The *Extra-Limites* department is open to them to defend themselves, *in propria persona.*

AMICUS's advice is friendly, but we cannot follow it. It would be very unwise in us to notice the scurrilities that may be lavished on us by men who hope to gain notoriety by these attacks. Next to the approbation of the *good*, we prize the obloquy of the *unprincipled* portion of society. The virulence of the *latter* rises, of course, in exact proportion and *pari passu* with our success. Let Amicus remember BRAMBLE's answer to an extorter of money, who held a lampoon in one hand and a panegyric in the other—"Publish your lampoon whenever you please; but if you dare to publish a panegyric of me, I'll break every bone in your skin." These are exactly our sentiments.

"Hated by knaves—and knaves to hate—
"Be this our maxim—this our fate."

CRITICUS has our thanks for his hints and communications. Some of the latter he will see in the proper place. We wish to know his real name and address.

SENEX's information will be turned to good account when the work comes under review. We shall always be obliged to him, or any other one, who will favour us with remarks on points of doctrine or practice, contained in the publications of the day. If considered disinterested and judicious, they will be applied in the right quarter.

The favours of Dr. O.—. of M. R.—, of G.—, and T. S. came safe to hand.

INTELLIGENCE.

The Proprietor of the American Medical Recorder, Mr. Webster, of Philadelphia, is republishing, in the United States, the following British works, viz.—

1. Mr. Cooper's Surgical Dictionary (3d edition.)
2. Dr. Johnson on Derangements of the Liver, (*from the 3d edition.*)
3. Dr. Parry's Elements of Pathology.
4. Messrs. Cooper and Travers's Surgical Essays.
5. Dr. Parry (Sen.) on the Pulse.
6. Mr. Lawrence on Hernia.
7. Dr. Johnson's Influence of Tropical Climates on European Constitutions (*3d edition.*)

We understand that a Course of Lectures on Medical Jurisprudence will be given at Glasgow, by Dr. Kennedy, during the ensuing winter.

A YOUNG GENTLEMAN, 24 years of Age, educated in Scotland, and possessing a Surgical Diploma from Glasgow, is desirous of a Situation as an ASSISTANT to a General Practitioner.

☞ *The Editor can take upon himself to recommend the Gentleman in question, as a very desirable acquisition, where steadiness, good moral character, and respectable professional acquirements, are looked for. A line, (post paid) to Dr. Johnson, will be attended to.*

Dr. Allan Maclean, of Cain's College, Cambridge, son of Sir L. Maclean, M. D. of Sudbury, was elected Physician to the Essex and Colchester Hospital, on the 1st May, in the room of Dr. Beatty, resigned

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Auxiliaries to Medicine, by Charles Gower, M. D. price $1 37.
Barlow's Essays on Surgery and Midwifery, 8vo. price $4 75.
Bradley's Observations on the Affections of the Bowels, 8vo. price $3 37.
Briggs' Translation, on the Disease of the Eye, by Antonie Scarpa. 8vo. plates, price $5 50.
Bayley on Consumption, 8vo. price $5.
Bichat on Life and Death, 8vo. price $3 75.
Barlow's Essay on Bath Waters, 8vo. price $2 62.
Bree's Inquiry into Disordered Respiration, 8vo. price $4.
Balfour on Emetic Tartar, 8vo. price $2 25.
Bancroft's Essay on Yellow Fever, 8vo. price $7 87.
Blackall's Observations on the Nature and Cure of Dropsies, 8vo. price $3 50.
Bradley's Illustrations of the Inquiry respecting Tuberculous Diseases, 8vo. price $5 87.
Bakewell's Introduction to Mineralogy, 8vo. price $8.
Bedingfield's Compendium of Medical Practice, 8vo. price $4 12.
Boyle on Cholera Morbus, 8vo. price $1 87.
Cooper and Travers' Surgical Essays, parts 1st and 2d, 8vo. plates, price $6 50.
Combs' Essay on Phrenology, 8vo. price $4.
Crichton on Pulmonary Consumption, 8vo. price $3.
Clutterbuck on Epidemic Fever, 8vo. price $2 75.
Copeland on the Diseased Spine, 8vo. price $2 12.
Clark on the Climate and Diseases of the South of France and Italy, 8vo. price $2 75.
Conquest's Outlines of Midwifery, plates, 12mo. price $2 75.
Conversations on Botany, coloured plates, price $3 50.

Curtis' Lectures on Botany, 3 Vols. Royal 8vo. coloured plates, price $30.

De La Garde's Treatise on Cataract, 8vo. price $2 75.

Dunlop on the Power of the Nitro Muriatic Acid Bath, price 75 cents.

Davy's Agricultural Chymistry, 8vo. plates, price $5 75.

Fox's Medical Dictionary, 12mo. price $2 75.

Guthrie on Gunshot Wounds, &c. &c. 8vo. price $6.

Gray's Elements of Pharmacy and Materia Medica, 8vo. price $4 75.

Hodgson's Treatise on the Diseases of Arteries and Veins, 8vo. price $5 75.

Howship's Practical Observations in Surgery and Morbid Anatomy, 8vo. price $5 75.

Hutchinson on Tic Douloureux, 8vo. price $2 37.

———— on Infanticide, 8vo. price $2 12.

Hall on Disorders of the Digestive Organs and General Health, 8vo. price $2 25.

Hey on Puerperal Fever, 8vo. price $1.

Hey (Life of) by J. Pearson, 8vo. price $6 50.

Horticultural Tour in Flanders, Holland, and France, with plates, price $5 50.

Hutchison's Surgical Observations, 8vo. plates, price $2 25.

Jackson on Febrile Diseases, 2 Vols. 8vo. price $9 62.

Jameson's Mineralogy, 3 Vols. 8vo. price $18 25.

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Kirby & Spencer Eutomology, 2 Vols. 8vo. col. plates, price $12.

Kerr's Medical Sketches, price $1 87.

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Larrey on the Use of Moxa as a Therapeutical Agent, 8vo. price $2 75.

Linnæus' Correspondence with other Naturalists, &c. 2 Vols. 8vo. price $11 50.

Contents

OF

No. 7, Vol. II. for DECEMBER, 1821.

ART. I.

Dr. GOLIS's Treatise on the Hydrocephalus Acutus; translated by Dr. GOOCH - - - - - - - - - - - - - - - 465

II.

Dr. JACKSON on the Epidemic Yellow Fever of Cadiz and the South Coasts of Spain - - - - - - - - - - 485

III.

Mr. WALLACE on Sulphureous Fumigations in Rheumatism, and Diseases of the Skin - - - - - - - - - - - 507

IV.

Transactions of the Association of the Fellows and Licentiates of the King's and Queen's College of Physicians, Vol. III. [Continued from No 6, p. 837.] - - - - - -

ART. 6. Mr. CARMICHAEL's Case of Amputation at the Hip-joint - - - - - - - - - - - - - - - - - - - 511

Case related by the Editors - - - - - - - - - 514

—— 7. Cases of Tracheotomy, with Remarks - - - - - 516

Case of Abscess behind the Œsophagus - - - - 518

—— 8. Dr. GRATTAN's Case of Gangrene from Mercury 521

—— 9. Dr. BROOKE's Case of Liver Cough - - - - - 524

——10. Dr. NICHOLL's Case of Erethism of the Brain - 529

——11. Dr. NICHOLL's Case of Melena - - - - - - - 529

—— 12. Dr. M'KEEVER's Case of Ruptured Vagina - - 530

——13. Dr. FOLLOON's Case of Disease of the Heart - - 532

——14. Dr. LENDRICK's Case of Poisoning - - - - - - 534

V.

PORRIGO, OR TINEA CAPITIS.

1. Mr. PLUMBE on Ringworm of the Scalp - - - - - } 534
2. Dr. ALIBERT on Tinea Capitis - - - - - - - - - }

VI.

Mr. SHAW's Manual for the Students of Anatomy - - - - 551

VII.

1. Mr. TULLY on the Plague of Malta, Gozo, Corfu, Cephalonia, &c. &c. - - - - - - - - - - - - - - - } 569
2. Dr. HANCOCK's Researches into the Laws and Phenomena of Pestilence, &c. - - - - - - - - - - - - - }

☞ *See also p.* 665.

VIII.

Dr. FERGUSON on the Nature and History of Marsh Poison - 585

IX.

SYPHILIS, PSEUDO-SYPHILIS, MERCURY.

1. Dr. Sintelaer's Scourge of Venus and Mercury - -
2. Mr. Bacot's Observations on Syphilis - - - - - - -
3. Dr. Thompson on Mercury - - - - - - - - - - } 597
4. Dr. Swediaur on Venereal Diseases - - - - - - -
5. Mr. Harrison's Engravings, &c. - - - - - - - -

X.

A Manual of the Diseases of the Human Eye. By Dr. C. H. Weller; translated from the German, by G. C. Monteath, M. D. - - - - - - - - - - - - - - - 626

XI.

SUPPLEMENTAL REVIEW; OR QUARTERLY PERISCOPE OF PRACTICAL MEDICINE, SURGERY, &c.

Art. 1. Contusions on the Epigastrium - - - - - - - 662
2. Dr. Hancock on Pestilence - - - - - - - - 665
3. Dr. Newman's Case of Internal Hæmorrhage - 668
4. Dr. Wilson on Tincture of Poppy - - - - - 669
5. Sir Gilbert Blane on Hydrocephalus - - - - 669
6. On Kinine, Cinchonine, and Sulphate of Kinine - 670
7. Dr. Platt on Epistaxis - - - - - - - - - 673
8. Dr. M'Leod on Prussic Acid - - - - - - - 673
9. Baron Larrey on Retinal Paralysis - - - - - 674
10. Dr. Meigs on Inverted Toe-nail - - - - - 675
11. Dr. Majendie on Extract of Opium - - - - 675
12. Sementini on Nitrate of Silver - - - - - - 676
13. Dr. Pinel, Jun. on Arachnitis - - - - - - 677
14. Dr. Ulrich on Carditis - - - - - - - - - 679
15. M. Maunoir on Sarcocele - - - - - - - - 682

THE

Medico-Chirurgical Review,

AND

JOURNAL OF MEDICAL SCIENCE.

(Analytical Series.)

"Perhaps that is nearly the perfection of good writing which effects for knowledge what the lens effects for the sunbeam—it condenses its brightness, in order to increase its force."—*Lacon.*

VOL. II.] DECEMBER 1, 1821. [No. 7.

I.

A Treatise on the Hydrocephalus Acutus, or inflammatory Water in the Head. By LEOPOLD ANTHONY GOLIS, Physician and Dissector to the Institute for the Sick Children of the Poor at Vienna. Translated from the German, by ROBERT GOOCH, M. D. One volume, 8vo. pp. 280. London, 1821.

IT is not among the least of the blessings of peace, that the scientific and literary, as well as the commercial, stores of Europe are opened, and their treasures diffused over the world at large. In language, however, which is the great medium of communication, there still exists a powerful check on its own operations—a defect which has not ceased to embarrass social intercourse from the "confusion of tongues," at the building of Babel, down to the present moment. Translation, the great remedy of this evil, is seldom rewarded in proportion to its merits: yet there is not a more praiseworthy undertaking than that of clothing, in vernacular language, the useful productions of a foreign soil—especially of a German soil, fertile as it is, in intellectual vegetation, but difficult of access over the frowning barriers of its rugged literature.

The work before us is characterized by Dr. Gooch, a gentleman whose competency of judgment will not be questioned, as "the best book he ever read on the acute hydrocephalus." The author, Dr. Golis, has been physician to an extensive institute for sick children, since the year 1793, enjoying great opportunities for observation, and possessing "practical talents of a very high order." Under these propitious circumstances, the reader will be prepared to expect

something beyond the usual run of medical publications: and in this expectation we believe he will not be disappointed. True it is, as Dr. Gooch has justly observed, the work in question "like all books, has its weak parts;" but where are we to look for perfection—except in the sublime dicta of the infallible critic, or his imaginary BOARD of censors? Dr. Golis informs us that he has already opened 180 bodies of those who have died of hydrocephalus, in the presence of several physicians and surgeons, and that these dissections always confirmed the accuracy of his diagnosis. We confess that such an assertion surprised us not a little; for, according to this statement, the Doctor's diagnostic acumen was as great at the beginning as it was at the end of his experience! But let that pass. It is only a way of talking, not very unusual among continental writers of the first respectability, though confined in this country to authors who seek fame or fortune through the medium of popular credulity, rather than the esteem of their brethren.

Dr. Golis divides hydrocephalus into the *hyper*-acute, acute, and chronic forms; denominating the first *wasser-schlag*, or, in our language, "WATER-STROKE."

"The hydrocephalus *hyper*-acutus, apoplexia hydrocephalica, wasserschlag, literally water-stroke, is a *sudden* effusion of fluid within the brain, either occurring idiopathically, or the consequence of the repelled matter of a previous disease (defect of crisis,) or the consequence of obstructed evacuation from an excreting organ, from which death occurs in a few hours. To this belong all those depositions on the brain which arise from small pox, measles, erysipelas, and other febrile eruptions; also those convulsions which follow

[redacted]

inflammation of the membranes or vessels of the brain, consisting in a collection of serum and coagulable lymph—the *former* in the ventricles or substance of the brain; the *latter*, like a membrane, filling the depths of the convolutions, and lining the walls of the ventricles as a preternatural coat; or covering the basis cranii, and hindering the absorption of effused fluid. The inflammatory nature of the complaint is inferred from the symptoms, which are those of encephalitis; from the influence of medicines; and from the appearances on dissection. From an attentive observation of nature, Dr. Golis divides this disease into four stages, which he thinks have distinguishable symptoms—viz. that of turgescence, inflammation, effusion, and paralysis.

Turgescence. Of the premonitory symptoms of the *turgescent* stage Dr. Golis draws a minute, and we believe, faithful picture. We can only notice the prominent traits. Children grow indifferent to things that formerly amused them—become inactive, silent, irritable, disliking light and notice. The eye and countenance lose expression, the body plumpness, the bowels and kidneys activity. On getting out of bed the child complains of giddiness, and moves the hand towards the back of the head, with a whining tone. The pulse, though generally natural, will be found, on attentive observation, "to beat oftentimes a few beats weaker, and sometimes to intermit altogether"—the skin is without perspiration—the colour of the face changeable—the gait is tottering. Such are the premonitions in healthy children; and it must be confessed that very many of them precede other diseases than hydrocephalus acutus. Dr. Golis also acknowledges that, in feeble, irritable, scrofulous, and unhealthy children, this premonitory train of symptoms is generally overlooked, even by the most acute physicians.

"Indifference succeeding to increased sensibility and irritability; a constipated state after habitual looseness or diarrhœa; a scanty, unusually yellow urine, with or without sediment; dryness of the skin, which, previously, on the slightest exercise, even on eating and drinking, and particularly during sleep, perspired profusely; sleep without medicine often suddenly occurring in restless children; remarkable gravity and earnestness, which had never been previously noticed; these taken together, with the symptoms already mentioned, are the signs by which the turgescence of hydrocephalus may with great justice be suspected." 16.

In children of one, two, three, or four months, the premonitory symptoms are very equivocal, and require a careful consideration of all the symptoms in connexion.

The rarest mode of approach is what our author calls the *tumultuous*; where, for instance, a lively healthy child, after a sudden accession of languor, confusion, giddiness, headach, gastric irritability, full, hard, slow pulse, ocular sensibility, tinnitus aurium, &c. is suddenly seized with violent fever, and, generally, convulsions. If the practitioner now uses efficient means, effusion is arrested; but, "if he does not apply the necessary remedies with overwhelming power," effusion will take place, in one, two, or three days, "but most commonly in a few hours," and the child will be irrecoverably lost. The duration of the turgescent stage is frequently only a few hours; but often eight, ten, fourteen, or even more days.

Inflammatory Period. In this stage the symptoms of turgescence are merged in those of phrenitis. The little patient complains of severe headach, pressing upon the eyes—tension and shooting sensation in the nape of the neck—great restlessness—high sensibility of the eye to light, opening perfectly only in the dusk—heat of the head to the touch, particularly the forehead and nape—but the vessels of the surface are rarely turgid or red. In the tumultuous accession of the inflammatory period there are convulsive tremblings of the eyes. The carotid pulsations are now evident, and there is a peculiar alteration of the physiognomy, in acute hydrocephalus, which our author considers to be pathognomonic. The nose is dry—the lips a faint dark red, and chapped—the tongue becomes covered with a white or brownish-yellow fur—thirst and appetite generally cease

in the belly as well as the head—the nights are sleepless or disturbed—there is grinding of the teeth—starting and screaming out of sleep—languor of movements—inability to sit up without support, or without inducing nausea and vomiting. The pulse is now slow, unequal, and intermitting, except when the patient happens to be suddenly excited by a frightful dream or great pain in the head, when "the quickness of the pulse doubles in a moment." The pulse above described Dr. Golis considers pathognomonic of the second stage of hydrocephalus.

The skin, before tense, becomes flaccid—the patient commonly lies on one side, with the hand under the head—often shifts posture, or desires to be placed in the mother's lap, hoping, in vain, for relief by change of situation.

Third Stage, or Period of Effusion. The greater number of the above symptoms, after lasting from a few hours to two, four, six, or even more days, becomes exasperated. The patient can no longer sit up—the restless desire for change of posture ceases—he generally lies on his back, kicking up the bed-clothes with one or both feet, and often moving the hand to the head, mouth, and nostrils, the latter of which he picks till the blood comes forth. The tones of the voice are nasal, and the words indistinct—the little patients catch at imaginary objects, or pull themselves by the hair of the head, or pick their lips. All the senses, except that of hearing, become dull or annihilated—the focus of vision becomes dislocated—the pupils are dilated, and insensible even to strong light—vision itself is very indistinct, and often double—there is moaning and sighing—a gloomy earnestness is painted in the flushed countenance, with a threatening expression, broken by intervals of pitiable expression, and exhibiting a curious contrast of fierceness and patience, indicative of the inward distress.

Emaciation advances—the dry flabby skin hangs round the shrivelled limbs—the urine passes unconsciously—a stool seldom follows even a large dose of calomel, without a clyster, and is, for the most part, natural in consistence, soft, pap-like, or figured, brown, black, stinking. Diarrhœa, without purgatives, is of rare occurrence. When it takes place, the stools are green, watery, slimy, and passed with pain. The pulse increases in irregularity and weakness—the respiration is more and more interrupted by sighs—the breath more fetid—in short, the soporose state passes into complete coma, and the last tragic scene approaches, before which the sufferers sometimes recover, for a short period, their consciousness, and are able to take food and drink,

thus deceiving the physician and mother with momentary hopes too soon again to vanish. It is almost needless to say, that in this and the succeeding stage recovery is impossible.

Fourth Stage, or Period of Paralysis. The preceding or third stage, after lasting ten, four een, fifteen, twenty-one, seldom thirty-days, terminates in convulsions, followed by palsy, generally of the right side, and often by cramp, which draws the head backwards and downwards, ceasing only with death. A violent fever takes place in this last stage, the ultimate exertion of nature, and a vain one, to remove the cause of death—the fluid effused on the brain. A hectic redness alternates with a deadly paleness on the disfigured countenance—the sight is gone—the pupil of the convulsed eye is greatly dilated, immoveable, insensible to the strongest light—the albuginea is blood-shot—the eye itself advances more out of its socket. The sense of hearing hitherto morbidly acute, becomes gradually dull—swallowing is difficult, and, at length, impossible—the urine passes involuntarily—the evacuations by stool are few, being green, sometimes dark brown, slimy, but not fetid—the pulse becomes exceedingly quick, intermitting, irregular, weak, and almost imperceptible, with a corresponding state of the breathing—and thus, after nameless sufferings, from thirteen to twenty-four days, "the little sufferers, wasted to a skeleton, expire." 37.

Diagnosis. We have been very careful to convey to the reader all the leading and many of the minute features of

oftener than weak ones, and boys oftener than girls. The worm-fever attacks phlegmatic, over-fed, large-bellied, bad-complexioned children, and according to my experience, girls as often as boys.

"3. The acute hydrocephalus has no distinct remissions, and is never epidemic. The worm-fever commonly has remissions, and, though seldom, is sometimes epidemic.

"4. In the acute hydrocephalus there is, even in the beginning, a striking change of countenance and actions. In worm-fever the face is pale, and commonly swollen throughout the whole disease, and the conduct betrays sluggishness.

"5. In the second stage of the acute hydrocephalus, there is violent pain in the forehead, continuing during sleep, alternating with pains of the belly and stomach; likewise a sense of tension in the nape of the neck, hands, and feet. In the worm-fever there are pains in the head and belly, but they are dull, not much complained of, and not distinct in their seat.

"6. In the turgescence of the acute hydrocephalus the patients lose their appetite and thirst, go seldom to stool, and pass urine at first scanty and milk-white, which afterward becomes yellow, and deposits a white, heavy sediment. In worm-fever they eat greedily, drink thirstily, often pass large stools spontaneously, and often a great quantity of colourless urine.

"7. In the acute hydrocephalus the patients never sleep quietly, soundly, and refreshingly; they wake out of the sleep, which resembles a confused slumber, very easily, and feel after it weaker than they were before; they moan and whine in it only slightly, and if they sometimes cry out loud, it is with a tone expressing pain, and sighing they turn from side to side. In worm-fever the sleep is always sound; we can scarcely wake the little patients; during sleep they sometimes cry out vehemently, and not unfrequently jump completely out of bed.

"8. In the acute hydrocephalus the pulse is not quick till the fourth stage. In the first it is almost natural; in the second and third preternaturally slow. In the worm-fever it is quick throughout the whole of the disease, and seldom or never below the quickness natural to the patient's age.

"9. In the acute hydrocephalus the skin remains dry till the end of the stage of effusion. In worm-fever patients perspire after eating and drinking, and on every exacerbation of fever.

"10. In the acute hydrocephalus, the patients often fall into deep musing fits, out of which they wake with a sigh. In worm-fever, dulness, tedium, stupidity, are painted on their countenance.

"11. In the acute hydrocephalus, in the stage of turgescence, the patient's step is without steadiness, weak, uplifted as if going up a step. In the worm-fever the walk is slow, but neither weak, nor unsteady, nor uplifted.

"12. In the acute hydrocephalus the patients in the inflammatory period are continually changing their posture in bed: in the moment of effusion they lie for a long time on one side, the lower hand under the head, the upper in automatic motion near the head.

In the worm-fever the patients lie still in bed, often cry out with fear, or spring out of bed in their sleep, or sometimes wake out of sleep, in which they lie across the bed, or with the head where the feet should be.

" 13. In the acute hydrocephalus the sight is over-sensible in the inflammatory period, dim in the stage of effusion, and blind in that of palsy. In the worm-fever, the patients never complain of strong light, nor are they perfectly blind at the approach of death.

" 14. In the acute hydrocephalus the hearing is preternaturally quick till the last stage of the disease. In the worm-fever they are slow of hearing, particularly towards the end of the disease.

" 15. In the acute hydrocephalus the nasal mucus is diminished in the stage of turgescence, and entirely stopped in the following stages, the patients gradually losing their smell: there is no violent itching of the nose. In the worm-fever the inner surface of the nose is moist, the smell acute, and there is always an intolerable itching of the nose.

" 16. In the acute hydrocephalus the vomiting which indicates the second stage, occurs in every case. In the worm-fever it is an accidental symptom, which is remarked only when worms have made their way into the stomach.

" 17. In the acute hydrocephalus, what is rejected from the stomach has a peculiar foul smell. In the worm-fever it has not.

" 18. In the acute hydrocephalus the respiration is natural in the second and third stages. In the whole progress of the worm-fever it is accelerated during the febrile exacerbations.

" 19. In the acute hydrocephalus the bowels are constipated, particularly in the three last stages. In the worm-fever, a ready action of the bowels, even diarrhœa, from slight laxatives, are common appearances.

" 20. In the acute hydrocephalus the urine is very scanty, and

"23. In the acute hydrocephalus palsy of one side, or of some part, often with cramp of the spine and general convulsions occur in the fourth stage, terminating in a few days with death. In worm-fever convulsions may occur without palsy of any part, at any period of the disease: if any palsy is remarked, it is transient.

"24. In the acute hydrocephalus towards the approach of death, hectic redness of the cheek alternates with deadly paleness, and the tips of the fingers are red: these appearances are never observed on the approach of death in worm-fever.

"25. In the acute hydrocephalus towards the latter end, there is a peculiar eruption about the mouth, and on many parts of the body; this characteristic eruption is entirely absent in worm-fever; frequently there appears instead a miliary eruption, the common accompaniment of gastric diseases.

"26. In the acute hydrocephalus the countenance expresses inward suffering. In the worm-fever the countenance is without any expression." 54.

The diagonis between acute hydrocephalus and typhus occupies between fourteen and fifteen pages, and appears to us quite superfluous—in this country, at least, where typhus is viewed in a much more restricted light than on the Continent. The diagnosis between water-stroke and "masked fatal intermittent," we shall also pass over, especially as our author informs us that the appearance of the latter disease under the mask of the former "is in the highest degree rare"—in fact, not having been seen once by Dr. G. in twenty years' experience.

Etiology.—Dr. Golis is sufficiently minute in his description of the *predisposing* causes of this disease; but does not offer much which we deem it necessary to notice in this article. Among the *exciting* causes he lays great stress on cold applied to the heads of new-born infants, the consequences of which are, in his experience, "internal inflammations in the head, which occasion the effusion of lymph and of serum in the cavities of the head and brain, terminating in death, which appearances are merely called convulsions." 79. But the most important cause of all, according to Dr. Golis, in large, healthy, and lively children, who have begun to run, romp, and jump about, is mechanical *agitation* of the brain, nearly the major part of the sufferers whom he has had occasion to treat having come by the disease in this way. The next exciting cause, in order of importance, "is the sudden drying-up of discharges from ulcers and moist eruptions on various parts of the surface of the body"—also the disturbance of the febrile exanthemata, as measles, variola, scarlatina, &c. External

inflammations of the head and neck, and all kinds of erysipelas which occasion increased turgescence in the head, or propagate phlogosis to the cerebral coverings, are liable to produce hydrocephalus, especially the hyper-acute form, or water-stroke, falsely called convulsions. Indeed, vehement inflammations of remote parts or organs will do the same, whether by impeding the circulation and causing a determination to the brain, or by means of that sympathetic connexion which the sensorium must have with all parts of the body. Violent vomiting, the incautious use of belladonna in hooping-cough, abuse of fermented liquors, insolation, suddenly suppressed diarrhœas and dysenteries, have all produced, in the experience of our author and many others, hydrocephalus acutus.

Terminations.—The water-stroke ends fatally—acute hydrocephalus is, for the most part, fatal; but sometimes terminates in recovery, or in some other disease, as blindness, deafness, idiocy, epilepsy, hemiplegia, marasmus, chronic hydrocephalus. Those patients who are cured, can be saved only in the stages of turgescence and inflammation. Death seldom takes place earlier than in the fourth stage, unless where the disease begins with tumultuous symptoms. The duration of the disease will easily be collected from the symptomatology.

History.—Dr. Golis contends, and we think with reason, that the disease was known to Hippocrates, as certified by the following passage.

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periods. The *causes* of this increase of frequency are very difficult to be ascertained. Dr. Golis inclines to the opinion of many physicians, that—"the present great frequency of this disease is to be sought for in the less frequent eruptions on the heads of children; believing, with them, that the lymphatic system has suffered a great revolution, since which, the achores have gradually vanished, and the diseases of effusion have become more frequent in children." We have not the least doubt but that the various tribes of human afflictions have been perpetually, and will for ever continue to be, undergoing revolutions in their nature, and consequently in their treatment—events that will never permit the pathologist and physician to enjoy a holiday in their labours; for, as it was in the beginning, we believe it will always continue—"sufficient for the day will be the evil thereof."

Our brethren of the Emerald Isle will be a little astonished to learn that some of the continental physicians attribute the increase of hydrocephalus to—the eating of *potatoes!* If we may judge of the material, by the intellectual, *effusions* of Irish brains, we should not be very apt to characterize them as a *watery headed* race.

A more rational cause of the disease under consideration, has been sought in the modern physical education of children, by which they are accustomed to take spiced foods, and spirituous drinks, in the first months of their existence. Dr. Golis imagines there may be something in this; but attaches far greater importance to "the rarity and almost disappearance of the achores."

Prognosis. Under this head we find many interesting remarks, with some unnecessary repetitions. The water-stroke, we have seen, is always fatal, and the acute hydrocephalus, when it has arrived at the third stage (effusion)—perhaps when it has gone beyond the *beginning* of the inflammatory stage, is also beyond the powers of our art.

"The more sudden the attack, and the more violent the symptoms, so much the more rapidly the stages follow one another, and so much shorter is the duration of the disease. On the contrary, the more gradually it approaches, the more mild and few the symptoms are, the less they are distinct, the slower is the transition out of one stage into the other, and the later does death terminate the sufferings of the patient." 95.

"If, in the stage of turgescence, or inflammation, by the use of antiphlogistic remedies, as calomel, and external and internal evacuants and counter-irritants, the hydrocephalic symptoms are entirely removed, and do not return for two or three days, during a perse

verance in the remedies, there is hope of recovery; but if, during the above-mentioned days, there is a recurrence of irregular pulse, pain in the head, and vomiting, then between the thirteenth and seventeenth days, seldom later, death unavoidably follows." 97.

When in the progress of the second stage, after blood-letting, calomel, &c. a general steaming perspiration breaks out during sleep, and continues several hours, it is a good omen, and arrests the effusion of lymph or serum in the cavities of the cranium. Partial and general sweats, in the fourth, or paralytic stage, are the near forerunners of death.

Even when the treatment is conducted in the most prompt and judicious manner, and attended with the most striking amendment, we are never sure of success. Dr. Golis has often seen the distressing headach, the violent vomiting, the optic sensibility, and other symptoms, vanish—the slow intermitting pulse become natural—the disturbed vital functions fall into order—the appetite for food and drink return—and yet, in 24 or 48 hours, death ensue.

Pathology.—Dr. Golis makes therapeia precede pathology, which we think is a very unnatural arrangement, and we take the liberty therefore to reverse it. We shall pass over what others have observed, (particularly as we offered an extended article on this subject, in the 8th number of our last series, for April, 1820,) in order to present the result of our author's own observations.

Dr. Golis found the brain firmer, and the blood-vessels less turgid, in the water-stroke than in the acute hydrocephalus:—the turgesence of vessels and consistence of me-

quantity and quality of the hydrocephalic effusion, there is great variety of statements by authors.

"I found in the water-stroke from 2 to 4, or 6 ounces of turbid fluid; in the acute hydrocephalus, for the most part, the same quantity, seldom a greater, and always clear; and in the chronic hydrocephalus, 1, 4, 6, even 8 pounds of equally clear fluid." 189.

"Likewise I saw, in all my dissections, in the water-stroke, and in the acute hydrocephalus, as did Morgagni and many others, the choroid plexus always pale and bloodless, and in chronic internal hydrocephalus, the organization of the brain, for the most part, destroyed." 190.

On this subject, Dr. Golis observes, "Dr. Baillie's anatomical remarks are excellent." With the latter illustrious English pathologist, Dr. Golis has found hydatids in acute hydrocephalus. In a very few cases Dr. G. found the effused water mixed with blood; but then there were complications, as inflammation or caries of the ears, &c.

Our readers will perceive that Dr. Golis merely states the *appearances* on dissection, but does not go into the *modus agendi* of the causes, or into any theory of the disease. We now, therefore, come to therapeutics.

Treatment of the Acute Hydrocephalus.—It is much more easy to enumerate the proper remedies in this dangerous disease, than to point out the proper time and mode of their exhibition. Hic labor, hoc opus.

1. *Stage of Turgesence.*—In this, as in all other diseases, it is necessary to use our best endeavours to discover the *causes* of the malady, and then to study the individual constitution and idiosyncrasies of the patient.

"Thus it is very important to know whether any eruptions have been repelled; old ulcers suddenly healed; habitual discharges from the ears and other parts have been suddenly stopped; whether the liver is diseased, or the mesenteric glands; whether narcotics, or intoxicating spirits have been taken; perspiration has been suddenly suppressed; the brain has suffered any mechanical agitation. Each of these must be accurately considered; the plan of treatment must be directed, not only generally against the disease, but specially, according to the exciting cause, and the constitution of the patient." P. 104.

Finding, then, the symptoms of turgescence, as described in the proper place, and having investigated the cause and constitution, the patient is to be placed in a roomy chamber, screened from strong light, and on a bed slightly inclined. He should be cautiously raised and laid down, as

all quick and rough movements increase the giddiness and uneasiness of the head. The temperature of the room should be rather cool than warm—the head a little raised and uncovered—the bed-clothes light—a familiar nurse employed to prevent irritation; and no force used in the exhibition of medicines, if possibly avoided. To prevent turgescence from passing into inflammation, the remedies are, calomel, antiphlogistics, evacuants, and counter-irritants.

"Of all the medicines which have been highly praised for the acute hydrocephalus, calomel is the most efficacious; in the turgescence, and at the beginning of the inflammatory stage, I may almost call it a specific: it excites, as it were, an abdominal or intestinal ptyalism, loosens the coagulating power of the lymph, and lessens, by the action which it excites in the alimentary canal, the orgasm in the head; awakes more activity in the ends of the serous vessels, by which absorption is increased, and, according to my experience, makes all other purgatives, for the most part, needless, and only in cases of very diminished irritability in the alimentary canal, or in very great collections in the same, is an addition of jalap necessary." P. 108.

Our author observes, that the dose and continuance of the medicine do *not* depend on the age, but the constitution of the patient, and the irritability of the alimentary canal.

"Children of one year and under, bear, in general, a far larger dose, (for example, eight or ten grains of calomel in the twenty-four hours,) without producing diarrhœa, colic pains, swelling of the salivary glands, than children of four, five, six, or eight years, who will scarcely take three or four grains before they begin to complain of pains in the belly. I have never seen the use of calomel produce salivation within a few days, as Wilmer and Perkins have; and a London physician, who has written in the London Medical Journal for 1781: with Mier and Graham, I have seldom seen this appearance at all, and then only late, after long perseverance in large doses." P. 110.

In children of from one to five months, a quarter of a grain —from six months to one or two years, half a grain of calomel may be given internally every two hours, until it discharges green slimy stools four or six times—"but not purging stools." In habitually costive children "it is often necessary to give the dose of calomel every hour, and in a high degree of insensibility of the alimentary canal a few grains of *roasted* jalap must be mixed with the quicksilver, in order to produce the wished-for effect." Dr. G. found that the *roasted* jalap did not, like the *raw*, excite vomiting, which is to be carefully avoided—neither does it gripe. If the calomel produce sharp colic pains, it should be left off till they cease, or the diarrhœa (if any) subsides—then to be

resumed at longer intervals, "as three or four hours, in half-grain doses, until the above effects, purging and colic, follow." In this way Dr. Golis perseveres in the use of the remedy as long as the symptoms require. The external use of mercury, our author thinks, is too slow in its effects, to be trusted to in such a disease. Dr. Golis does not agree with Whytt, Odier, Quin, Wilmer, Leib, and others, in the propriety of large doses of calomel to children in this complaint. He has seen inflammation of the intestines brought on by such practice. In this injunction we entirely agree with Dr. Golis.

"If this highly-praised remedy does not always produce the wished-for effect, the bad preparation of the medicine is not unfrequently the cause; the only contra-indications which can forbid the use of the calomel, are violent pains in the abdomen, an inflammatory state of the stomach and intestines, and weakening diarrhœa: but as, in the many hundred patients whom I have attended for the acute hydrocephalus, I have never seen inflammation of the belly, violent pains, or diarrhœa, but instead of the last, commonly constipation; so I have never neglected, when I was called during those moments, when a cure could be hoped for, to employ this remedy. Yet, should the above-mentioned contra-indications occur, no practical physician would prescribe it under such circumstances." 115.

Emollients. Next in importance to mercury Dr. Golis ranks *emollients*, or what we term in this country *diluents*. They should not, however, possess any acescent quality, on account of the calomel. Vegetable infusions or light decoctions, as of marsh-mallow, barley—or merely solutions of gum arabic, with or without nitre, all having the temperature of the chamber, except at those times when it is desirable to promote diaphoresis—then they may be lukewarm. Gum arabic emulsion, our author asserts, alleviates the distressing headach sooner than any other medicine. Digitalis, sudorifics, diuretics, and tonics, are all improper in the stage of turgescence.

As *external* means, blood-letting—cold applications to the head—stimulating pediluvia—blisters—mercurial and antimonial frictions, and enemata, are the principal. General blood-letting is much less frequently necessary than local.

"According to my experience, blood-lettings are fruitless in the water-stroke, pernicious in chronic hydrocephalus, and only in the acute hydrocephalus, at determinate moments, and under certain circumstances, efficacious and necessary." 119.

Cold applications to the head, "whilst internally the calo-

mel has produced a derivation and reaction in the alimentary canal, are of striking efficacy." Tepid baths or semicupia are dangerous. Pediluvia with mustard, &c. are all that can be ventured on in this stage. For blisters, the calves of the legs are the best place of application. From mercurial frictions there is little to be expected for the removal of the turgescent stage itself.

"Yet this is the time for employing them, if we expect from them any assistance in the subsequent stages of this disease, in case it passes into them. The occiput and nape of the neck, and the thighs, are the places to which they should be applied. If the mercurial ointment (unguentum Neapolitanum) is employed, a whole ounce must be rubbed in, in four and twenty hours, that is, a drachm every three hours. If calomel is chosen instead, four or six grains in some vehicle may be rubbed into the same parts. These frictions may be employed at the same time with the internal use of calomel, and may be continued for twenty-four or thirty-six hours." 123.

The same observations apply to tartar emetic ointment, that were made on the unguentum hydrargyri.

Children at the breast, or reared artificially, should use the same diet as before, but sparingly.

2. *Inflammatory Stage.* In this stage blood-letting, of course, holds the first rank.

"In healthy, active, strong, plethoric children, in the first six months of life, particularly after violent agitation of the brain, and in an inflammatory season, two, three, and in pressing cases of violent tumultuous accession of this stage, four ounces of blood may

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ral blood-letting, and may, in most cases, be preferred. At a more advanced period of life, however, and in cases of pressing danger, general blood-letting must be employed. In drawing blood the practitioner must pay the strictest attention to its effects on the pulse and the pain in the head.

"As long as the former continues irregular, and not very weak, as long as it does not return to the regularity of a natural, or a febrile pulse, and as long as a diminution of the vehement characteristic pains of the head, or a state of weakness does not take place, the blood may be allowed to flow." 134.

"At the same time at which the requisite blood-lettings are undertaken, internally the antiphlogistic remedies, and with them the calomel must be carefully administered to the patient; the former must be given lukewarm, liberally, and at short intervals; but in little infants, in doses proportionate to their age; and the latter, as I have already said of the treatment of turgescence, must be persevered in until colic pains occur, and several green stools follow. Only I must remark, that the calomel, in this stage of the disease, even in large doses, will often be given twenty-four hours without producing any stool, and that the patient will often have taken ten, twelve, fourteen, and even more grains, before a stool is procured. In these cases, as I have already said, some grains of roasted jalap should be mixed with the calomel; besides which, clysters of camomile tea with soap, honey, salt, sugar, and such like, should be employed, in order to hasten the action of the calomel, which (I now repeat once for all) is not indicated later than in this stage of the acute hydrocephalus, nor can contribute to the cure of this disease." P. 136.

In this, as in the turgescent stage, diluents, of course, are proper, and with them may be conjoined gentle diuretics, particularly the infusum digitalis. Sudorifics may now also be exhibited.

On digitalis Dr. Golis makes many interesting remarks. He considers that this medicine is by no means so efficacious here, as in acute hydrothorax after scarlet fever.

"Yet in the stage of turgescence and inflammation, in connexion with calomel and antiphlogistics, after suitable blood-lettings, where, with diminished power, there prevails an increased sensibility of the arterial system, it is very efficacious, as these combined remedies produce a powerful revulsion, by action on the alimentary canal and the urinary passages, occasioning determination *from* the head, and increasing the evacuations by stool and urine." 139.

In Dr. G.'s experience the medicine had little effect on the urine, and scarcely any on the pulse.

In the inflammatory stage, cold applications to the head, mustard cataplasms to the feet, blisters, and clysters, are

equally proper as in the turgescent. The foot-bath is generally productive of inconvenience. Frictions with mercurial ointment and emetic tartar are useless in this stage, as their effects come too late. Blisters, in general, should not be applied till after blood-letting. The most usual positions are, to the occiput, the nape of the neck, or between the shoulders; but Dr. G. justly observes, that their operation, in these places, is often interfered with by the cold applications to the head, or the blood oozing from leech-bites. The belly and præcordia, "because of the great sympathy between them and the head," are the fittest places, Dr. G. thinks, for large or small blisters. The calves of the legs, the thigh, and the upper arm, are also proper situations for vesicatories.

If the physician have been fortunate in preventing or arresting the hydrocephalic effusion, he must maturely deliberate on what part of the treatment he is first to remit or omit—and what medicines to continue, in order to prevent relapse. The parts excoriated by the blisters should generally be kept discharging for some time during the convalescence, to secure perfect recovery.

"In the after-cure, or treatment of the debility which the remedies have occasioned, bark, valerian, arnica, camphor, musk, castor, deserve the preference before the other medicines of this class; and in great morbid irritability of the arterial system the digitalis, in combination with one of the above-mentioned strengthening remedies, is the most effectual medicine for rapidly removing this morbid state." P. 158.

Dr. Golis begs to draw the attention of practitioners to that state of the patient "in which the symptoms of inflammation and of effusion seem mingled with one another." Under such circumstances, the same treatment as in the inflammatery stage, would, of course, be most proper, as the mistake, if any, would be on the safe side.

Of an operation to remove the water of *acute* hydrocephalus, we need hardly say any thing. In the *chronic* form of the disease, there is more feasibility in the proposal, and we shall allude to the cases of Dr. Vose and some others in this country, in the proper place.

Dr. Golis has made a few observations on the *palliative* treatment in the two last, or fatal stages of the disease; but in these we do not see any thing particularly worthy of notice. The following passage on prophylaxis we shall extract.

"The prophylaxis consists in a suitable diet, in the preservation of perspiration, of the action of the bowels, of the secretion of urine,

of the free circulation of blood in all parts of the body, of a good appetite and digestion, in a careful prevention of every thing which can increase the determination of blood toward the head, as violent and frequent movements of the body, agitation of the brain, abuse of spirituous drinks, spiced, heating food, overloading of the stomach, collections in the abdomen, constipation, and such like; further, in a gradual hardening of the body, by moderate exercise, by gradually leaving off warm clothing, and inuring to all temperatures of weather, but always with regard to the peculiar constitution of the child, to the mode of rearing which has already been employed, and to its age. Constipation should be prevented by gentle, not drastic purgatives, especially by small doses of calomel, mixed with a few grains of rhubarb, or by a change of diet. Our forefathers, who cautiously, from time to time, gave children eccoprotics, may have contributed much to the prevention of this disease." 179.

Dr. Golis has seen some fatal instances of symtomatic hydrocephalus from inflammation of the bladder, brought on by imprudent retention of the urine during play. Parents should also be warned of the bad effects of tight dresses, immoderate eating, and violent agitations of body or mind. Nasal hæmorrhages, a common and beneficial occurrence in children, should not be interfered with unless profuse. In all hurts and accidents in children, the consequences should be guarded against by blood-letting and antiphlogistic measures. Lastly, when a practitioner is called to a case, where the symptoms are ambiguous, and he "cannot determine with certainty whether they indicate acute hydrocephalus, or some other disease which resembles it," "let him apply those means which are serviceable in the turgescence of the acute hydrocephalus, and which can do no harm in any other resembling disease." This we believe is a very judicious advice.

We have presented the reader a comprehensive, and we hope clear, analysis of the historic, didactic, and preceptive portions of the volume: the remainder (about 80 pages) being occupied with cases in illustration, and formulæ of medicines. We do not consider it necessary to attempt any delineation of such a multiplicity of examples, especially as many of them are but very imperfectly or obscurely sketched. We shall therefore introduce a single case, taken almost at random, as a specimen.

"Henry A, four years old, vaccinated, strong, lively, and well nourished, heated himself by violent running in a spacious garden. Covered with perspiration he sat down with bare head and breast, and back covered only with his shirt, in a pouring rain, till he was wet through. The next morning he complained of weight in the head, tension at the nape of the neck, transient lancinating pains in

the forehead, feebleness, absence of thirst and appetite, and slight fever, in which, however, the pulse was at the natural quickness and fulness; yet I already remarked irregularity in the beats, as some were hardly to be felt and others were omitted. He was constipated, had scanty though natural urine, the skin was dry to the feel. My first care was to restore perspiration, from which I expected much good. In the second night after this exposure to cold, the fever became greater, and, at the same time, the above-mentioned symptoms more violent; a remarkable remission of the fever followed toward noon of the third day. Emollientia, with radix sambuci, and ammonia acetata with syrup, were the medicines which he took; and mustard cataplasms to the feet, and clysters, which operated, were the external remedies which I employed. I expressed to the parents of the child, my fear of the acute hydrocephalus, and proposed blood-letting, at which they were more terrified than at the danger to which their child was exposed, because a surgeon, a stiff Brunonian without principles, had related some horrible stories about blood-letting, and prophesied the worst consequences. In a *consilium* with a learned physician and this surgeon, the disease was stated to be an intermittent fever, because at this time intermittents reigned epidemically in and about Vienna, and in spite of my remonstrances, Peruvian bark was ordered, which the parents with great readiness administered to their child. But the results verified my prognosis; for the inflammatory period with severe pains in the head, and all the symptoms which accompany this stage of acute hydrocephalus, showed themselves. A second *consilium* with true practical physicians, attached to no system, and intimately acquainted with this form of disease, was now called, but too late. All the means employed, which, earlier would certainly have hindered the effusion, were no longer capable of arresting the progress of the disease. Insensibility came on, followed after six days by palsy with

the septum of the ventricles was broken through; the white substance of the brain was of a reddish colour; the viscera of the thorax and abdomen were perfectly healthy. The incredulous physician began, after this, to believe in the acute hydrocephalus. Whether the surgeon, who soon after went to Russia, was converted, I know not." P. 230.

Fortunately these "stiff Brunonians without principles" are now rather scarce in this country, where physicians attend more to practical indications collected at the bedside of sickness, than to physical and metaphysical speculations engendered in the libraries of the learned.

In closing this analysis, we have no hesitation in stating it as our opinion, that the medical profession of this country is much indebted to Dr. Gooch, for introducing to their acquaintance an illustrious stranger, whose treatise reflects credit on the age and country in which it was produced. That Dr. Gooch's translation is sometimes rather stiff and literal, must be acknowledged—nor can it be said that, "materiam superabat opus." But where the *matter* is so excellent, the *manner* is of very subordinate consideration.

The experienced reader will readily perceive that Dr. Gölis's description of the disease sufficiently proves that climate, education, and diet, often modify the features and course of maladies, and consequently that his symptomatology, *in some particulars*, does not exactly apply to hydrocephalus, as usually seen in Great Britain. Still, however, the general traits, and frequently the minutest shades of this insidious disease, are so evidently and so faithfully copied from Nature, that they will be read with interest, and remembered with advantage by practitioners of all ranks, ages, and countries. We shall look forward with much anxiety for the appearance of Dr. Golis's promised Treatise on *Chronic* Hydrocephalus, and hope Dr. Gooch will lose no time in presenting his countrymen with a version of the forthcoming essay.

II.

***Remarks** on the Epidemic Yellow Fever which has appeared at intervals, on the South Coast of Spain, since the year 1800.* By Robert Jackson, M. D. One vol. 8vo. pp. 207. London, 1821.

Prone as the world is, in general, to vice, there are numerous and splendid examples of virtue in every age and

country—and beset as the medical profession is by selfishness, knavery and charlatanism, there is, thank Heaven, a great deal of honour, integrity, disinterestedness—we had almost said *devotion* to the advancement of knowledge and the interests of humanity, scattered through its members. We see indeed, with feelings of humiliation for poor human nature, too many men, whose education ought to have elevated their views, sacrifice all the nobler sentiments of humanity at the shrine of SELF, or cast off all sense of shame, and turn the credulity of mankind into a source of lucre to themselves, totally regardless of the contempt or even abhorrence of their brethren. But, on the other hand, the profession exhibits numerous examples of men devoting their time, their talents, their wealth, and what is more than all, their HEALTH, or even LIFE, to the welfare of society at large, or to a posterity who can only know them by name. We do not wonder so much at these instances of philanthropy in *youth*, whose warm blood nurtures generous sentiments, feeds enthusiastic feelings, and engenders those aspirations after ideal beatitude, which time and experience too often prove to be unattainable by mortals. But when we see this philanthropy grow with man's growth, and strenghthen with his strength—when we see it as fervid at sixty-five as at twenty-five, unchilled by hoary age, unchanged by length of years, it commands the respect of the most unprincipled, and excites the admiration of the most virtuous portions of society.

The venerable author of the work before us has sustained a character of this description, from the earliest period of his professional career, down to the present moment. Whether serving amid the foggy marshes of Flanders, the burning defiles of St. Domingo, the dreary savannahs of America, or the romantic valleys of Spain, Dr. Jackson was actuated by but one ruling passion, one predominant impulse—the acquisition of useful knowledge for the promotion of MEDICAL SCIENCE, not the advancement of SELF. This thirst after knowledge, this true philosophy, has not deserted him in his old age, for, *qualis ab incepto*, he lately left the comforts and quietude of a country retirement, so congenial to declining life, to wander among scenes of pestilence and death in a foreign land—and that without the chance of remuneration, but the certainty of loss as well as danger and fatigue.

The Cadiz fever of 1819 having excited our author's curiosity to ascertain its true nature, he applied to Government for a passage and credentials to the Spanish authorities, without any other condition or exemption from expense.

The passage and introductions were granted, but not till after a lapse of time which rendered it improbable he should that year see the epidemic, excepting in its decline. He embarked, however, in the beginning, and landed at Gibraltar towards the end of December. There he was detained nearly two months, in consequence of a military insurrection at Cadiz. There being now no hopes of seeing the epidemic of that season, Dr. Jackson determined on a journey to the Levant, at his own expense, partly in the desire of seeing Greece, a country in which he had lived in idea the greater part of his life, and partly in the hope of obtaining information respecting the diseases (particularly plague) of the Mediterranean shores. He therefore visited Malta, Constantinople, Smyrna, the Islands of the Archipelago, Athens, and the Morea, returning to Gibraltar in the end of July, 1820, from whence he proceeded to Cadiz, where he arrived on the very day that the epidemic was officially announced.

In this expedition (so different in its object from most other expeditions) our able author was accompanied by Mr. O'Halloran, assistant surgeon of the 64th regiment, a gentleman "who had courage to look danger in the face in whatever shape it might present—zealous in the pursuit of professional knowledge, and of an ardency of temper which committed him wholly to the duty which he undertook." This gentleman was of infinite service to our author in *post mortem* researches, as well as therapeutical labours.

The first chapter of the work contains an animated sketch of the medical topography of Cadiz and its environs, of which we can present but a very few features. The province of Andalusia is of irregular surface, the scenery being, in many places, beautifully picturesque. The elevated part of the province is generally dry, of a light unproductive soil, and covered with heath or brushwood. The extensive level plains are nearly in a state of bog in the rainy season; and the soil being loose and light, the water penetrates deep into it, and rises again in copious vapour during the great heats of summer. It is well known that exhalations from the earth cause, or at least carry with them the cause of, intermittent fevers. Accordingly we find that the people of Andalusia who live on the plains, or on eminences near the plains, are "much harassed by agues."

"The type sometimes assumes the quartan form; sometimes it appears as distinct remittent; and sometimes it sinks into obscure remittent or gastric. From gastric there is an easy transition to continued or contagious typhus; and sometimes, under epidemic influences, a form of disease not unlike that which has obtained the name of yellow fever prevails to some extent." P. 2.

Cadiz itself occupies a peninsular point nearly level with the sea, the houses being erected on shelves of rock, at one place, on alluvial sand at another—of course, many of them stand over a bed of water. The confined site of Cadiz has induced the inhabitants to build the houses very high, and make the streets very narrow—the *former*, however, being good, and the *latter* kept very clean—"insomuch that this city, crowded as it is with population, rarely, if ever, presents any thing that is offensive to the eye, or that can be supposed to be noxious to health." 4. The Isla, contiguous to Cadiz, is of considerable extent, and mostly a swamp intersected by numerous sluice canals. Yet it is not unhealthy, which may fairly be attributed to the strong salt water forming the moisture of the soil. Topographical sketches follow of Puerto Real—Puerto de Santa Maria—and Xerez, for which we must refer to the volume itself.

The second chapter is on a very important subject—the introduction (if really introduced) of the yellow fever into Spain, and its real or supposed propagation by what is termed contagion. The facts and arguments brought forward by Aregula, or still entertained in that country, are dispassionately examined and candidly weighed by our author, aided by all the information he could gain on the spot; and this discussion we recommend to the serious attention of the profession, hoping as we do, that it may lead to important conclusions, medical and commercial. Mean time we shall endeavour to present our readers with some of the results to which our author has come, from the details alluded to.

1. The importation of the disease from a foreign country is still credited by the authorities and mass of people in Spain, though, Dr. J. thinks, it has never been proved by evidence, or even brought to reasonable probability—the events of the year 1820 stripping the assumption of every claim to credence, as no attempt has been made to trace the disease, in that instance, to foreign origin.

2. The belief universally obtains through Spain that the disease is personally contagious: that is, capable of propagation from individual to individual, by contact or proximity. Yet our author thinks that this opinion, confidently as it is maintained, is invalidated by authentic records and facts.

"In proof of the assertion, an authority is here adduced which may be thought to be valid, because it is admitted by the persons who report it against the dictate of their prepossessions. In the year 1800, when upwards of ten thousand souls died at Xerez de la Frontera, sixty persons were employed to bury the dead. The burriers entered the houses where the dead lay, took the bodies in

their arms, often it is presumed in a loathsome state, put them into the carts in heaps, and drove them to the place of interment. None of the buriers were infected. They were said to have been under the influence of liquor on most occasions; and, as such, were supposed to be comparatively less susceptible of the impressions of contagion, than they otherwise could have been. The supposition is of some weight; it is not conclusive of the inference that has been drawn from it. It is known from other experience, that if strong contagion exist in the clothes or coverings of the dead, (and had it existed at all it must have been strong in the present case,) the power of wine is only a feeble protection." 38.

A somewhat similar event happened in the year 1819 at St. Lucar. The buriers of the dead having shamefully abused their office, the friars of the Franciscan convent volunteered the interment themselves.

"The offer was accepted; and the friars in entering on the duty, which they had thus imposed upon themselves, found the majority of the houses, or sick apartments deserted, the bodies of the dead lying in various postures upon beds, or on the floor. They wrapped them in sheets, or in such other covering as presented itself in the apartment, carried them to the bier in their arms, and afterward in the bier on their shoulders to the grave. No one of this meritorious band was attacked by the disease, although five of them were supposed to be susceptible of it as not having had it at a former time." *P.* 39.

In corroboration of the present argument, Dr. Jackson states that washers and others who handle the impure bedding and body-linen of the sick or dead, are not, from the best information that can be obtained, more liable than others to the attacks of this disease. The contrary is the case where typhus has prevailed.

3. From the facts here stated, our author concludes "that the contagion of yellow fever does not attach itself to clothing, or other substance that has been in contact with the diseased subject."

"The disease appears suddenly and spreads rapidly as a pestilence on many occasions; but it does not spread except in epidemic atmospheres. This last is a point of high interest to the community. It is not denied by any one, at least it is asserted by many creditable witnesses, that multitudes of persons, who have removed from an infected circle, to a circle exempt from infection, either under disease or with the cause of disease so forward in preparation for explosion, that the malady, actually exploding with its genuine characteristics in a short time after the removal, has run its regular course, and terminated fatally or otherwise after a certain duration, without communicating any thing hurtful to the most assiduous of the attendants. Examples of this fact are so frequent, both in Spain

and other countries where yellow fever is known, that it is impossible to refuse assent to the inference, that the disease, if actually contagious, is contagious, so as to propagate its kind in epidemic atmospheres only. The simple disease is not sufficient; and, if this be admitted, the conclusion is direct that yellow fever is not exportable, unless the atmosphere of the epidemic circle be also exported in the hold of a ship or otherwise; a position which is absurd, and which directly negatives the necessity or utility of quarantine restriction." 41.

4. Yellow fever often arises after intercourse or association with the infected—it also arises where it is impossible to trace intercourse or even suspect it, as happened in 1820, when the fever appeared at Cadiz and Xerez, where there was no visible source of infection.

"It is admitted, even by those who believe the doctrine of contagion in all its extent, that those who seclude themselves fall down nearly in the same proportion as those who walk the streets; and, as the fact is distinct and often verified in experience, it furnishes conclusive evidence that yellow fever has another cause, at least may be called into existence by another cause than the direct application of personal contagion; consequently that seclusion does not hold out a warrant of security." 43.

But although the facts here stated appear decisive against the yellow fever of Andalusia being a personally contagious disease, yet, as Dr. Jackson properly remarks, a concurrence of contingent causes may produce a very imposing case of contagion, if things are superficially observed. The yellow fever, for instance, during an epidemic influence, often strikes like a pestilence by the mere concourse of people in a close

resident in Cadiz for some months, and who was desirous to look at the reigning epidemic with his own eyes, went occasionally into the hospitals where persons ill of that malady were collected. He spent more time than usual one day in examining minutely into the condition of a person who appeared to him to be extremely ill. Next morning about eight o'clock, and about sixteen hours after he had left the hospital, he was seized with symptoms of severe indisposition, such as appeared to himself to be of very unusual kind. The indisposition in fact soon declared itself to be the prevailing epidemic; and, according to his own account, it was analogous in its symptoms to the case that had so particularly attracted his attention in the hospital." 45.

Here, Dr. J. observes, is a *prima facie* case of contagion; yet it is not conclusive. It must be recollected that the gentleman in question lived in the epidemic atmosphere of Cadiz, and traversed without reserve every part of the town. He might thus be fairly supposed to have imbibed the seeds of the disease from an unknown source.

"But there are grounds to believe that his visit to the hospital accelerated its appearance; and that the impression made by the circumstances of the patient, to whom his attention was principally directed, tended to modify the form of the morbid act when it did appear." 45.

A novice in the hospital of San Juan de Dios had been confined with something like mumps for a few days, but had returned to duty, and on the day on which he resumed it, he looked into the dead room, where a person who had died of one of the worst forms of yellow fever was under dissection. He was seized with fever in the night, and it extended to the 17th day. Another of the novices, who had been most assiduous in his attentions to the sick, and who assisted at dissections, was taken ill about the same time; but being treated in a very different manner from the former, he was convalescent on the third day. These cases will be considered by many as arising from the direct agency of contagion.

"The author is disposed to believe, that the explosion here alluded to was merely contingent, whether occasioned by immersion into an atmosphere less pure than the common atmosphere, or by impression through the eye on the sensibilities of a body predisposed." 46.

We are, of course, totally ignorant of the nature of these epidemic influences in the air; neither do we know the precise morbid state of air in crowded hospitals—whether disease is favoured by things added to, or subtracted from it. But the following facts we know, for we have often felt them.

"Persons of every habit, but more especially persons of susceptible habit, who enter into the apartments of those who are ill of the epidemic fever, rarely fail to experience unpleasant sensations at stomach, viz. distention and irksomeness, not unfrequently uneasiness in the bowels, suspension, or change in the natural functions, headach, heat, pain of the eyes, thirst, white tongue, disturbed sleep, and dreaming amounting to reverie. These beginnings of the morbid act are local; and, as such, they are for the most part removable by the prompt application of remedies that act locally; that is, by emetics, purgatives, or others which produce decided changes in the secreting surfaces of the alimentary canal. It is presumptively by means of these remedies that Mr. O'Halloran, the gentleman who accompanied me to Cadiz, and who in a manner domesticated with the sick at Xerez, warded off the attacks of formal fever. He was almost constantly under a greater or less degree of indisposition; and I was indisposed myself on various occasions, never in health, though my visits to the sick were desultory and comparatively few. It is not said that the impressions, which produced indisposition on these occasions, were impressions from the cause of yellow fever: it is evident that the general atmosphere was epidemic; and it was probable that the atmosphere of the sick ward was so in a higher degree than elsewhere; or, if not so, that the diseased act was there suffered to explode with more facility, in consequence of the diminished coercive energy of the atmosphere which filled the sick apartments." 49.

5. The last subject of this part of the work is, the question of liability to second attacks. The author saw or heard of not fewer than twenty persons under the epidemic of 1820, who had medical certificates, and actually believed

self acknowledges, it is much easier to point out impropriety than to say what is right. It is not possible, he thinks, to offer a proper name to a malady where there is nothing specifically distinct in character to discriminate it from all others. The disease is a formidable one, but cannot perhaps be properly termed a new one. All circumstances considered, it is not possible, Dr. J. thinks, to come to any other conclusion than that it is the endemic of the place, rendered epidemic at particular but uncertain periods, by the operation of causes to us totally unknown at present. On this account our author modestly, but wisely, we think, declines giving the disease a name.

Our author makes a great number of highly interesting observations on the nature of epidemic influence, of which we shall be able to take but a very cursory glance. He considers, and justly so, the atmosphere *in* which we live, as a product of the earth *on* which we live; and thinks it very reasonable to suppose that the epidemic influence, whatever it is, is "the product of a temporary local derangement in the bowels of the earth, subversive of the order of movement among the materials which manufacture a healthy atmosphere." In this, as our readers know, we perfectly agree with Dr. Jackson, and with Sydenham himself, whose theory was far more probable and natural than any which has been substituted since.

Whether the morbid action arises from something that over-excites the system, or from some defect of what maintains the healthy movements therein, we cannot say; but the act itself, Dr. Jackson thinks, "has evidently some analogy with the effect of electrical influence, both in the manner in which it strikes the subject at first, and in the manner in which the disease produced by it proceeds to its termination." The epidemic aura is prejudicial to many other animals as well as man.

The yellow fever of Andalusia is cognizable, at first view, by the experienced eye; but the traits which discriminate it are not entirely communicable by words. Nevertheless, as it is important that the opinion be formed within the first twelve hours, Dr. J. endeavours to sketch out its most characteristic features in that early period of its course. "If the physician, he observes, remain undecided until yellowness or black vomiting supervene, it is of little consequence whether he decide or not." The eye, so peculiarly calculated to exhibit the state of the mind, is not less indicative of the state of the body in certain diseases. We shall give Dr. Jackson's observations on this subject in his own words.

"The *eye* of persons attacked with the yellow fever of Andalusia is peculiar. It is sometimes inflamed, muddy, and confused, as if it had been exposed to the smoke of green wood; it is sometimes pearly white, vacant, inanimate, or like the eye of an idiot, sometimes irritable and intolerant of light: it is not cheerful and brilliant as it sometimes is at the commencement of contagious fever. These marks are striking, but they are not diagnostic. The diagnostic consists in a certain indescribable glistening suffusion. The character is not communicable to words; the impression is notwithstanding strong on the mind of those who observe, and it is cognizable at the earliest period of the existence of the disease. Besides general aspect and expression, the ball of the eye undergoes more or less of change in its coats and substance at an early period; and the appearances are so peculiar, through the whole of the after progress, as to be considered with reason as the surest index of the issue. It sometimes becomes yellow as in jaundice, sometimes fixed and glassy as if the humours were artificially congealed, and the moving power in a state of balanced action; sometimes it is lurid, the expression dull, the colour of the white dusky yellow, not unlike the colour of rancid tallow:—the glistening suffusion is still observable and still characteristic." 61.

The *contenance* also exhibits a discriminative aspect to the experienced; but it is wholly impossible to portray its characters in words. It is not only always devoid of the natural expression of the countenance in health, but in fevers of common character. "It is such, in fact, as indicates strongly that an unknown cause of force has constricted, and in a manner enchained the usual play of animal life."

The *invasion* of yellow fever is frequently, but not al-

up in describing the symptomatology of the fever as affecting different constitutions, which he divides into the sanguineous, phlegmatic, serous, and gangrenous. These delineations are most minute, and show the hand of a master. They must be studied in the original, as they will afford ample food for reflection in the minds of the pathologist, physician, and physiologist. We cannot attempt an analysis of them, but we shall present some extracts from Dr. Jackson's recapitulation of these historical descriptions. Thus recapitulating the symptomatology of that form of fever which is manifested in the sanguine temperament, Dr. Jackson states as follows:—

"1. The yellow fever of Andalusia manifested the principal force of its action on the organs of the great circulation on some occasions, but not in many comparatively. The action of the heart and arteries was here strong, even violent and tumultuous, occasionally more prominent on one part than another. Where the excited act was what may be called general in the system, the favourable termination was effected through sweat and hypostatic urine; the unfavourable, by quiescence from struggle as an effect of inability. The termination of the prominently local act was effected by effusion or deposition of purulent secretion in the part; the final issue was favourable or unfavourable according to circumstances of contingence." P. 114.

Necrotomy. The appearances on dissection vary according to the duration of the disease, and the prominent character of its symptoms. In the rapid forms, effusions of blood were sometimes found on the surface of the brain from ruptured vessels, without mark of regular inflammation. In the protracted forms, the membranes, and even substance of the brain appeared to have sustained more inflammatory action, the ventricles being generally filled with bloody serum, and the base of the brain deluged with it. "The mucous membrane of the stomach, particularly about the cardiac orifice, more or less inflamed in almost every case—in some almost gangrened. The internal surface of the intestines corresponding with that of the stomach. The liver generally turgid and increased in size—"sometimes gorged with blood in a manner rotten"—the gall bladder filled with thick, tar-like bile. No particular appearance in the other viscera.

"2. *Phlegmatic Temperament.* A form of yellow fever of restrained or bridal vascular action, impaired power of absorption, disposition to agglutination between contiguous surfaces, and stagnation of the moving fluids in particular organs, the ostensible act manifested on the system of lympho-mucous secretions, was frequent

both at Cadiz and Xerez in the year 1820, but particularly at the latter during the author's sojourn at that place. The pulse, after the first tumults of invasion were past, rarely exceeded eighty strokes in a minute, sometimes not more than sixty or seventy. The strokes were equal in time as the strokes of a clock, open and free as superficially observed—not elastic and buoyant; they were such in fact as could scarcely be said to be febrile. The skin was soft, flaccid, pasty, often moist or damp. The heat was for the most part diffused generally; and it was not often much above or below the heat of health in actual measure; sometimes however the surface was cold as marble, similar to what occasionally occurs in cholera. The lips were sometimes moist and rosy, sometimes dry and pale as if from suppressed capillary circulation. The countenance was generally pale, fixed, and statue-like; sometimes it presented circumscribed flushings on the cheek-bones, but without corresponding signs of animation. The eye gave an impression of stiffness and irksomeness as it moved in the socket: it was dull and torpid, inanimate and often of a pearly white, vacant in expression, and vailed as it were by a glistening suffusion that cannot be easily, if at all, described in words. The tongue was sometimes foul and coated; sometimes rough and dry—with urgent thirst; sometimes not much changed from natural. Nausea, eructation, distention, and impatience of pressure at the epigastrium were often distressing. Nausea was an early symptom; it was sometimes accompanied by peculiar indescribable sensations at the upper orifice of the stomach, and followed in most instances by vomiting of the liquids which had been recently drank, rendered ropy by morbid secretions of a dirty colour—rarely, if ever, bitter, yellow, green, or what is called bilious. On the third day in some, in others not until the fifth, a dirty coloured fluid, interspersed with flaky substance, was thrown up in quantity—dark and muddy like turbid coffee, sometimes more intensely black like the juices

precipitated by convulsion in some—The history now given, is the history of the common routine of the unfortunate course; a course, which appears to be sometimes suspended, about the fifth or seventh day, by a stream of life thrown into the system at those times in a manner that cannot be explained, but that tends, by the new action produced, to avert death. The circulation, from drawling and sluggish, becomes buoyant and active; the tongue assumes a white and furred appearance; in short, a new train of febrile movement takes place, runs a given course, and terminates, after a short duration, sometimes favourably, sometimes otherwise. Besides revival from a forlorn condition, by what may be called an extra infusion of life into the system, certain sensations of pain and constriction, which are sometimes prominent among the symptoms of yellow fever, give way suddenly on some occasions; the natural functions resume their course in a calm manner, and health is gradually restored to its pristine state without ostensible marks of commotion or crisis." 117.

Necrotomy. When this form of the fever also runs its course rapidly, and terminates in twenty-four hours, the brain exhibits turgescence of vessels, preternatural firmness of the encephalon itself, effusion of water in the ventricles—not seldom at the base of the brain or in the theca vertebralis. If the course be protracted to the fourth, fifth, sixth, seventh, or later day, "the liver and spleen are often gorged with black blood, so as to be perfectly rotten; and patches of gangrene are often observed at different points in the intestinal canal, without marks of preceding inflammation." Contractions of the intestines and even intus-susceptions were not uncommon. The stomach and intestines generally contained more or less of coffee-coloured fluids—the inner coat of both organs often loose in some places, and floating in the liquid. It is curious, that "when the fever ceases, the figure is plump and round, as if there had been a complete restriction on the organs of waste or expenditure during its continuance."

The above form of fever was frequent, but that to which we are now coming was the dominant, formidable, and most common form of all, both at Cadiz and Xerez, in 1820. We shall present Dr. Jackson's recapitulatory sketch, as the best analysis of the regular and detailed description which precedes.

"3. The third form of yellow fever was the most common form in the year 1820, both at Cadiz and Xerez; in fact more than equal in amount to both the others. The morbid act was manifested principally on the system of serous secretions—external and internal. The system of the great circulation is necessarily implicated in every febrile process; but its action was here rarely excited to excess; that is, the pulse was not strong, vigorous, and

expanding, and as aims at removing impediments by force: it was often frequent, sharp, and quick, more or less irritated, but apparently repressed from developing itself freely by strong capillary constriction. The skin was dry from the beginning; and it generally continued dry throughout. The lips were dry, often arid and parched; sometimes pale and bloodless as if the capillaries were obstinately constricted. The countenance was sharp and peevish, more or less contracted—in contradistinction to placid, expanded, and serene. The eye glistened and twinkled, often sparkled like the eye of a cat in a dark room, particularly at an advanced period. The white of the cornea usually became of a faint lemon colour, or dingy yellow, after the third or fourth day. The heat of the skin was generally higher than natural; sometimes acrid and pungent in an extreme degree. The texture of the skin was closely constricted, little susceptible of the stimulation of blisters, oftener seared than vesicated by their application, or, if vesicated, the parts underneath dried and shrivelled suddenly, so as to resemble dead hide rather than the skin of a living man. The disease, as acting on the sero-mucous base, appeared to have great latitude in degree of force. The constriction of the capillaries was sometimes close, so as almost to deprive the skin of its animation; sometimes it was moderate, so that life circulated through all its parts with buoyancy. The symptoms disappeared imperceptibly on some occasions in the latter case; sometimes perceptibly by an obscure crisis on the third, fifth, or seventh day. But, though this happened sometimes, there was no sure dependence on its occurrence:—the most experienced could not calculate with certainty. The countenance and surface of the body, which were animated, and as it were buoyant with life during the first and second day, suddenly became dry, shrivelled, and withered like the blighted leaf of a plant, sometimes at the commencement of the third, sometimes of the fourth, and oftener per-

few would suspect *him* of colouring facts to suit the hue of an hypothesis. In the second place, it is sufficiently manifest, from the faithful histories above mentioned, that the phenomena of fever (whether from aerial, terrestrial, or animal effluvia) do not *spring* from inflammation, or any thing analogous to inflammation, in this or that organ; for we see the disease, when violent, destroy the patient before any trace of inflammation becomes visible. These facts are necessarily fatal to the theories of Ploucquet, Clutterbuck, and Broussais. In the third place, it appears very probable, and almost evident, that the incipient movements in fever, that is, the first train of effects resulting from the application of the *ab externo* cause, are of a nature nearly the reverse of inflammation—namely, a weakened and disturbed state of the nervous and vascular systems, sometimes destructive of life before inflammation commences. In the fourth place, we have clear evidence that this first train of symptoms is succeeded, after a longer or shorter time, by turgescence, and then inflammation of one or more organs, which inflammation and its consequences, effusion, adhesion, disorganization, &c. are very generally the cause of death, where the case proves fatal. From this view of the subject it is abundantly evident, (and actual practice every day confirms it,) that any plan of prevention or treatment founded on the exclusive doctrine of local inflammation being the source of fever, must be not merely ineffectual, but actually injurious. During the continuance of that train of phenomena which directly succeeds or is produced by the operation of the external cause of fever, the depletory treatment would be death. This depletion, however, is our main hope in the reaction which succeeds these incipient movements, as preventive of those fatal consequences of inflammation so strongly depicted by Dr. Jackson and all accurate observers. As for the inflammation, whether primary or secondary, having an exclusive site, in brain, stomach, or intestines, the theory is untenable, and totally inapplicable to practice.

The fifth chapter of the work before us is on prognosis, and contains a fund of the most valuable information and important remarks. We can make no pretence to a regular analysis of this, or any chapter in the book. Indeed, if all medical works were like those of Dr. Jackson, analytical reviews would be rendered nearly useless. We shall merely glance at a few prominent features of this chapter.

The fever of Andalusia commencing suddenly with intense headach, and gastric irritibility simultaneous, indicated great danger. The same may be said where convul-

sions, stupor-like apoplexy, or outrageous delirium, with wild, agitated, bloated countenance, ushered in the fever. A rough dry tongue, a torpid statue-like aspect of countenance, a glistening glassy eye, a nauseous odour from the body, insensibility of the skin to blisters or sinapisms, dryness and paleness of the lips, suspension of cutaneous secretion, streaks or patches of a livid, green, or violet colour, are all indicative of the greatest danger. In respect to the pulse, our able author observed that when it became calm, regular, full, soft, and slow, at a certain point in the diseased course, unaccompanied with decided signs of favourable crisis, it was an almost certain sign of a fatal termination. As to animal temperature, a strong, deep, and concentrated impression of heat indicates danger; while a sharp, pungent, or caustic heat, accompanied with an arid, parched, and constricted skin, dry and shrivelled lips, &c. was a decidedly bad sign, though not invariably a mortal one.

Our author considers the yellow fever of the West Indies, though a dangerous disease, and much more rapid in its course than that of Andalusia, yet much less treacherous in its character than the latter, which is often masked and insidious. For a great many curious and important particulars respecting diagnostics, in the graver forms of fever, we refer to the work itself.

The sixth chapter is on the TREATMENT of the different forms of fever described in the preceding pages. To this, as to the other chapters, we cannot do justice in this analysis; but we hope our readers have already appreciated the value of the original too well, by the matter laid before

wine. The cinchona is ordered to be given every third hour. and bouillon the same; so that the patient has only one hour and a half of respite at a time from swallowing medicine or nourishment. Arèjula increases the quantity of bark by a scruple at a time, until the dose amounts to two or three drachms. Where the stomach is irritable, syrup of poppies, or opium and ether, are added to the bark; and where the bark cannot be retained in substance, the tincture is substituted in its place, with the addition of vitriolic ether, &c. Blisters and sinapisms are applied to different parts of the body, and removed as soon as they excite pain and irritation.

Such is the basis of Arèjula's practice. He asserts that his plan was successful, but furnishes us with no precise document by which we are enabled to judge. The idea of debility predominated in his mind—blood-letting is branded by him as directly destructive of life.

Dr. Flores de Moreno is physician to the king, and has the greatest practice in Cadiz. Having visited warm climates, and observed the English and American modes of treating yellow fever, he administers calomel and jalap, or calomel alone, every two hours till stools are procured. giving beef-tea in the intervals, by way of support; and accelerating the operation of the calomel by clysters of sea-water with some olive oil. Flores seldom fails, he asserts to procure abundant bilious evacuations by these means: and, with bilious stools he usually obtains relief from the pressure of the more urgent symptoms of the disease. This step being secured, tincture of bark is given as preventive of the untoward accidents. Where symptoms of a threatening aspect, viz. heat, distress, and anguish at stomach, make their appearance on the third or fourth day, Dr. Flores directs a strong sinapism or blister to be applied to the pit of the stomach, and saline purgative enemata to be thrown up every three or four hours. Finally, he gives one or two spoonsfull, occasionally, of a mixture composed of balm-tea, Hoffman's liquor, and laudanum. Flores endeavours to uphold the patient's strength by bouillon, panada, rice cream, &c.

"He boasts success with some confidence; and his plan of treatment, it must be admitted, is better calculated to attain it than that of Dr. Arèjula; but it is by no means to be regarded as an efficient plan of treatment for the cure of the more aggravated forms of the yellow fever." 135.

We may here remark that both plans of treatment, if they be not decidedly and directly injurious, must be con-

sidered as fatal to the doctrine of Broussais, which makes fever the effect of local phlegmasiæ in the mucous membrane of the stomach and bowels. Should this theory be correct, it is scarcely possible that a single person could escape destruction by either modes of treatment. At the same time we are far from believing that either modes of treatment were judicious; on the contrary, we agree with Dr. Jackson in thinking them any thing but efficient.

It may here be noticed, that a circumstance occurred, under our author's observation at Cadiz, in 1820, which proves that the utter proscription of venesection in this fever is not founded on a proper base.

"An English gentleman, a medical man, resident in that city, was attacked with the epidemic in one of its worst forms. He was seen, at an early period after the attack, by the writer and another English medical officer, and bled largely; that is, to between four and five pounds. Instead of being buried in two days, as some in the faculty had predicted, he appeared in the street in ten days in perfect health. He recovered, and treated some persons who came under his own care in a similar manner as he had himself been treated. Not one of them died, and the most of them were fit for their duty in ten or twelve days." 136.

The novelty and severity of this discipline attracted the notice of the Spanish people, and bleeding and other means of depletion were employed soon afterward by the most eminent practitioners of the city. The results were said to be favourable; and the yellow fever appeared, from the official reports, to be less fatal after this change in the method

value as a physician and man of science; and, as not conscious of value in himself, he becomes indifferent to the exercise of his duty, makes a short and superficial visit for a fee of four reals, collects as many reals as he can, and leaves the concerns of the patient very much to their own course. It thus happens in Spain, as in many other countries, that the first of human sciences, as estimated by its merits, is converted, by a bigoted and overbearing policy, into a mean and prostituted trade—of some convenience, but of little real utility to mankind." 139.

Dr. Jackson must surely be aware that Great Britain, at least, ought to be exempted from "many other countries," where the science of medicine is converted by an overbearing policy into a prostituted trade. The faculty here are surely as free as the air they breathe; and however a few may be found depraved enough to prostitute the science itself and their own talents to a mean, mercenary, trading principle, yet we will venture to assert that, in the medical profession in this country, taking it collectively, there is more genuine philanthropy, disinterestedness, and humanity, than in all the other learned professions together. It is unfortunately too true that medical men permit themselves to fall into little paltry bickerings, jealousies, and scandals, as far as regards one another; but all things considered, there is a general and a glowing zeal in relieving human affliction wherever it exists, totally uninfluenced by the hope of reward. Nay, we will venture to assert still farther, that the eleemosynary patient is attended by the first talent in the land with as much anxiety for the event, as is the nobleman with his princely remuneration at command.

But to return. Dr. Jackson, in the second section of this chapter, details his own method of treating yellow fever, which he considers under three heads—namely, as abandoned to its own course—as interrupted, but not arrested—and as perfectly arrested by active means. The first plan is very common among Spanish physicians. The yellow fever, though not distinctly periodic in its movements, has yet a disposition to change, abate, or terminate at given times. Now if the disease remit in this way, without having previously disorganized some viscus or structure essential to life, the sensibility to common impressions is found to be greatly increased, from preceding suppression, and the healthy actions are readily reproduced by the common stimulants. This happens occasionally every where, and very often in Spain, where the people are mostly of sound constitutions, and a firm temper under affliction.

The second rule of practice in febrile diseases is that most commonly adopted, even by what are called active

practitioners. But it cannot, of course, be considered as more than an auxiliary. It is directed against symptoms threatening particular organs. It mitigates violence, but it does not break the chain of the diseased movement, and thus arrest what is wrong.

The third or last is decisive, but difficult of execution, and requiring judgment and boldness to apply it at an early period of the disease. If applied, our author asserts, within six or eight hours from the commencement of indisposition, "it rarely fails to arrest or suspend the ostensible febrile act." Yet even in this case, perfect restoration of health is not always the immediate consequence of the suspension. It often requires three, five, or seven days to bring things to their natural state.

The Andalusian fever, Dr. Jackson thinks, is not an indomitable, though a dangerous disease. Its treatment requires to be modified, but the basis of it is the same in all cases. The first point is to arrest the diseased act—the second, to reproduce the action of health. As the impulse of the circulating blood sustains all the organic actions of the system, so the subtraction of it necessarily brings those acts to a pause, whether healthy or diseased. And as the atmosphere appears to be the general stimulant of animal life, so pure air, and especially movement through pure air, demonstratively maintains life in the greatest activity. "The impulse of the pure air to the proper vital organs is obviously the cause which reproduces the healthy act thus violently disturbed by the impulse of causes of morbific quality."

was done to oppose its natural course. He saw it treated and opposed vigorously at other places in Spain with good effect. In some cases, however, where vigour was used, success did not follow, "either owing to the want of necessary auxiliaries, or to hidden treachery in the character of the disease itself, which, as not easily seen, was not easily averted." The Andalusian fever, however, like that of the West Indies, varied into three principal forms, according as it acted on the sanguineous, lympho-phlegmatic, or serous temperament, requiring, of course, a modified treatment. These modifications are drawn by our author with the hand of a master, and are particularly recommended to the perusal of the medical practitioner, as containing excellent principles for guidance in many other fevers than those of Andalusia or the tropics. We shall merely cull out a few particulars from this portion of the volume, hoping that they may excite to a more intimate acquaintance with the original.

Speaking of the second form of the fever, and alluding to the gastric irritability which is so very troublesome a symptom, he acknowledges that the prejudices against emetics is not unreasonable, since they are rarely useful, and often dangerous, especially if exhibited prior to abstraction of blood.

"But after the preparation of a given condition by bleeding or other means, the effect of emetics, particularly of emetics of white or blue vitriol, instead of being injurious, appeared to the writer to be eminently useful in allaying irritation, and in giving such a tone of vigour to the parts excited into action as precluded the chances of inflammation rising to excess. The power of the absorbent system is evidently diminished in the form of yellow fever now under consideration; and, as the action of the emetic has a tendency to increase absorption, and the action of emetics of turbith mineral a stronger tendency than others, a trial was made of it at Xerez in the year 1820,—and with signal good effect:—the person was convalescent in twenty-four hours. From this success, Mr. O'Halloran was induced to try it in others; and, from his experience, he considers it to be a remedy of great value—next in power perhaps to the lancet." 158.

A purgative which our author has found very useful in the West India fever consists of tincture of myrrh and aloes, with one drachm of ether, or an ounce of the rectified oil of turpentine, preceded by five or six grains of calomel, and three or four of genuine James's powder. The tincture produces feculent stools more efficiently than any other form of purgative; but as it is slow in its operation, the ether or turpentine stimulates and gives it activity.

We find our limits so far overstepped that we must conclude this article with the following extract :—

" There is another point connected with the treatment of this disease at the period stated, which is of great importance to be studied and rightly understood. The head is often principally, at least prominently affected in this form of the yellow fever ; and, as the head is the most important part in the animal body, the part connected with every function of the machine, the neglect of its diseased condition often compromises the life of the patient. Besides fits, convulsions, or deep stupor at the period of invasion, a certain degree of stupor—a peculiar degree of indifference and apathy, heaviness, fixity, or vacancy of the eye and countenance indicate distinctly that the substance of the brain is materially implicated in the morbid act. It is customary in such case, after bathing and bleeding, to cut off the hair, to shave the head, and to apply blisters to the scalp and nape of the neck. It is proper to do so ; but it is reasonable to believe that the purpose would be attained with more certainty, if moxa or actual cautery were applied to the nape of the neck, as near as possible to the joining of the cranium with the vertebral pile. If the brain be in a state of torpor from what may be called congestion or pressure, the powerful stimulus from the heat of the cautery or moxa may be supposed to excite it into activity : if the structure be violated, no calculation can be made of a favourable result ; but the physician may have cause to be satisfied that he has gone as far to attain it as human art, or human courage allow him to go." P. 174.

The last chapter in the work is on the law of quarantine ; and we are sorry we cannot possibly spare room for any notice of his important remarks. We trust that even this very imperfect sketch of Dr. Jackson's work will lead many

III.

Observations on Sulphureous Fumigations, as a powerful Remedy in Rheumatism and Diseases of the Skin. By WILLIAM WALLACE, M.R.I.A. Member of the Royal College of Surgeons in Ireland; one of the Surgeons to the Charitable Infirmary, Jervis-Street; Surgeon to the Dublin Infirmary for curing Diseases of the Skin; Lecturer on Anatomy, &c. One vol. 8vo. pp. 92. Dublin, 1820.

Mr. WALLACE appears to deplore the retardation of the arts and sciences, even in this enlightened era, by the indifference or unwillingness with which new discoveries are frequently received, "more particularly when they are much in opposition to accustomed modes of thinking and acting, and when trouble and exertion are required for their application;" while at the same time, for want of sufficient zeal to examine into the foundation of opinions and practice, when first promulgated, "the errors of enthusiasts or the assertions of dissemblers, are sometimes permitted to be propagated, and to have a long and powerful influence in retarding our inquiries after truth."

Our author has, for some years, directed his attention to diseases of the skin, in the Irish metropolis, where cutaneous defœdations are particularly prevalent. In 1818 he was enabled to found a dispensary for this class of complaints, and finding sulphureous fumigations of such great utility, he has, in this publication, attempted a succinct history of the origin of the invention—of its progress on the Continent—and of the investigations to which it had been submitted there, contenting himself *for the present* with adding, in conclusion, some general observations and reflections derived from his own experience in hospital and private practice. The greater part of the pamphlet before us consists of a history of the introduction and establishment of sulphureous vapour baths in France, under the superintendence of Dr. Galés—and of translations of cases and observations by Dr. De Carro, of Vienna, published in 1819. We cannot go into an analysis of these cases, but we recommend a careful perusal of them to all those who have the means of employing the fumigations in question. We introduce the following description of the effects of this bath on the human frame, as it corresponds exactly with what

we have witnessed ourselves at an establishment in this metropolis.

" The temperature of the apparatus should be such as, without creating uncomfortable feelings, will cause a copious flow of perspiration, about ten or fifteen minutes after the patient has entered the apparatus ; and, as very different degrees of heat will be required for this purpose, dependent on the various circumstances of sex, age, temperament, or disease, no very determined rule can be laid down. For the most part, I have found a range from 100° to 120° of Ft. necessary. Sometimes, however, a lower temperature has answered the purpose ; and not unfrequently, patients have expressed themselves better pleased with one much higher.

" In general, when the patient has been in the apparatus about ten or fifteen minutes, we remark his face to become red, his eyes brilliant and more prominent, his pupils much dilated, the capillaries of the conjunctiva injected with red blood, and all the appearance of a high degree of excitement. This is soon followed by an effusion of perspiration ; first in minute points, afterward in larger drops, and, in some cases, it becomes so profuse as to trickle in a large quantity down the cheeks.

" If the surface of the patient, which is enclosed in the apparatus, be now examined through one of the openings, it feels remarkably warm, and bathed in perspiration ; which communicates to the hand a peculiar sensation, not of an oily nature, but astringent, almost as if we immersed our hands in a solution of sulphate of alumen. No doubt this is owing to the deposition of the sulphureous acid on the skin, and its combination with the secretion from the surface. At the same time, the pulse and respiration are a little accelerated ; subject, however, to considerable variety, and the former feels full and strong.

dent partly on the constitution, age, and disease of the patient, and partly on the temperature of the apparatus, and the quantity of sulphureous acid disengaged, that, while on some occasions, the skin is as red as scarlet, on others, we do not observe more than a general faint blush.

"The quantity of fluid discharged from the skin, for the most part, creates greater astonishment than the redness of the surface; for the skin is not merely covered with general moisture, but oftentimes the seat and the bottom of the apparatus are perfectly wet with the fluid, that has dropped from the patient during the operation.

"This discharge from the surface, and the general and excessive excitement, are sometimes followed by a momentary feeling of exhaustion; but, on other occasions, the excitement produced appears to continue for hours, accompanied by a high complexion and vivacity of countenance, and gradually to go off without any feelings of debility or languor succeeding. Even in those cases, where this feeling of exhaustion is most remarkable, it generally ceases before the patient is dressed." 80.

The continental physicians (and we may add some of those who superintend sulphur fumigations in London) cause their patients to recline in a bed or on a couch for an hour or two after each operation. In the majority of cases, Mr. Wallace thinks, this is not necessary—on the contrary, he is disposed to believe that an opposite practice, viz. that of immediately dressing and taking some gentle exercise (weather permitting) on horse or foot, would be more beneficial. It occasionally happens that, before patients become habituated to the sulphur vapour bath, they complain of slight vertigo, watchfulness, and diminution of appetite. But these symptoms are fugitive, excepting in a very few cases, which require a suspension of the operation.

"Frequently, however, a very opposite effect, even from the first fumigation, is observed, the appetite of the patient is improved, his rest becomes more tranquil and more profound, his alvine discharges more copious and regular, and a diminution takes place of any nervous excitement, that may have existed.

"Perhaps the most remarkable effect, observed to arise from the operation of sulphureous fumigation, is that of its causing, in some cases, a general desquamation of the cuticle, and in others, a peculiar papular eruption." 82.

This desquamation sometimes does not take place till several weeks after the bath is left off—proving, Mr. Wallace thinks, that these fumigations continue to influence the body, and modify its organic actions long after they are disused—and explaining, of course, why their beneficial influence on diseases is sometimes not apparent till after the

remedy is left off. The symptom of desquamation is a very favourable one—generally indicative of the disease giving way to the remedy. The eruption (papular) sometimes produced by this process, bears some analogy to what is called the bath eruption, and is accompanied by some febrile excitement, smarting, and itching—always terminating in desquamation. Occasionally this occurrence interrupts, for a very few days, the treatment by fumigation. The following passage evinces candour on the part of our author.

"In the course of our employment of this remedy, we shall occasionally be much disappointed. Cases, in which it is clearly indicated, and in which, from experience in others closely resembling them, we might have every reason to presume on its efficacy, will resist its operation. Occasionally, when we conceive, that a cure is almost accomplished, our hopes are dashed and disappointed, and an aggravation, at least of a temporary nature, of all the symptoms occur. Sometimes, also, its beneficial effects, although certain and progressive, are remarkably slow." 84.

This, however, as Mr. Wallace justly observes, is no more than we might expect, in so obstinate a class of diseases as those of the skin.

In general Mr. Wallace regulates his conduct on the following principles, to wit:—if, after a few applications, the disease is rendered worse, instead of being benefited, it will, for the most part, be useless to persevere. But if the application can be continued without any aggravation of the disease, he should persevere for a considerable time: for, occasionally when the fumigation is unequal to the removal of a disease, it renders it susceptible of being cured by

IV.

Transactions of the Association of Fellows and Licentiates of of the King's and Queen's College of Physicians in Ireland. Vol. III. 1820.

[Continued from No. 6, p. 337.]

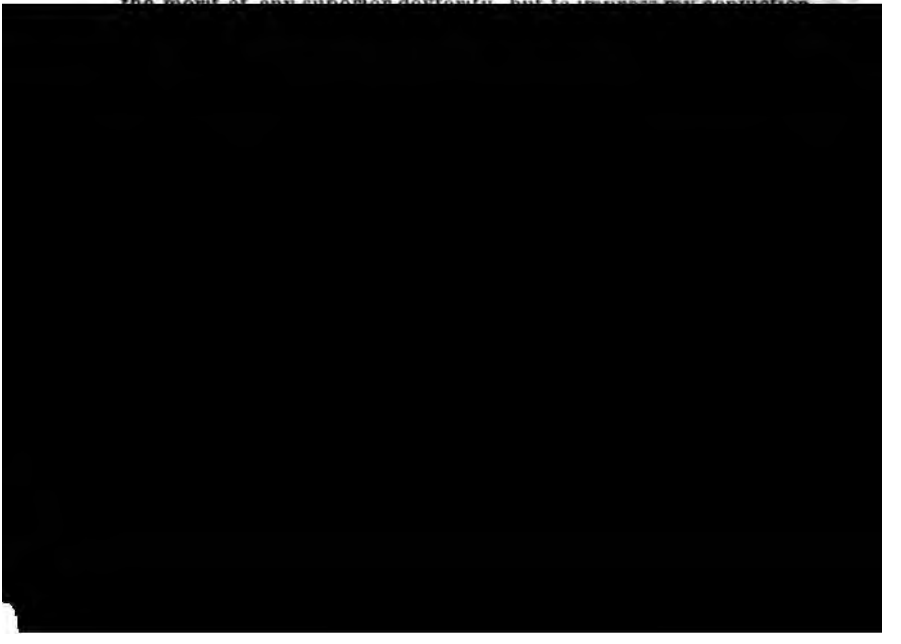
ART. VI. *Case of Amputation at the Hip-Joint, for the Removal of an Osteo-Sarcomatous Tumour.* By RICHARD CARMICHAEL, Esq. Surgeon of the Richmond Hospital, House of Industry, &c. &c.

OUR readers are aware that Baron Larrey, Dr. Veitch, Mr. Guthrie, and others, have demonstrated the possibility—we had almost said the *facility*, with which the thigh may be removed at the hip-joint, notwithstanding Mr. Pott's gloomy resolution never to perform the operation on the living body. If many cases have proved unsuccessful, the failure was more owing to the constitution of the patient, or the unfavourable circumstances in which he was placed, than to the shock of the operation.

The subject of the present paper was a very interesting young woman, who entered the Richmond Hospital on the 17th August, 1819, having a tumour extending from the knee to near the top of the thigh, the circumference of which where most prominent, measured 27 inches. It was of a firm consistence, of a pale colour, and intersected by large veins. The disease had been about twelve months acquiring its present formidable growth; and prior to that period the patient had enjoyed good health. It commenced with a severe pain in the upper part of the tibia, soon followed by a swelling of the inside of the knee, which kept gradually increasing, attended with constant and acute pain. The swelling slowly and gradually extended on the lower part of the thigh; but three months previously to her admission the pain suddenly ceased, and at the same time the tumour made rapid and alarming advances. It was advancing with such celerity that on her admission Mr. Carmichael judged it necessary to call a consultation, when amputation at the hip-joint was deemed the only hope. The patient consented.

"The amputation was performed according to the plan recommended by my friend Mr. Guthrie, in his valuable work on gunshot wounds of the extremities, before an immense concourse of the profession and their pupils, as it was the first occasion of witnessing the operation in this city. The artery in the groin being firmly

compressed by an assistant, the skin and fascia on the outside of the thigh were first divided by an incision with the large amputating knife, commencing four fingers breadth below the anterior superior spinous process of the ilium, and carried on the inside of the thigh to the same distance below the tuberosity of the ischium. A considerable gush of blood instantly followed from the division of those enlarged veins I have mentioned as extending over the face of the tumour, and upper part of the thigh. This hæmorrhage precluded the possibility of taking up the femoral artery in any reasonable time before the division of the muscles, so that I immediately proceeded to divide those on the inside of the thigh along the edge of the incision just made, by one steady stroke of the knife down to the bone.—The arterial circulation was found to have been completely commanded by the pressure in the groin, so that I was able to secure, at my leisure, the femoral artery, and three or four deep muscular branches. This being accomplished, I proceeded to connect the extremities of the incision I had made, by one on the posterior side of the limb, and then to separate the glutei muscles from the great trochanter and linea aspera. The next step was to lay bare the capsular ligament; when the assistant who held the limb, and watched the progress of the operation, immediately drew it strongly outwards, by which movement the ligament was put on the stretch, and its situation exposed by the protrusion of the round head of the bone: it was immediately divided, and the head of the femur pushed through the opening. The attachment of the round ligament was then removed, and the remaining muscles divided by passing the amputating knife behind the bone, which completed the separation of the limb from the trunk; all this was done in a much shorter period than that usually employed for a common circular amputation; a circumstance which I mention, not with the view of laying claim to



"The flaps were then brought together in a line from the ant. sup. spinous process of the ilium to the tuberosity of the ischium, and were found the precise extent necessary to cover the face of the wound. They were secured by three points of the interrupted suture and straps of adhesive plaster, over which were laid compresses dipped in diluted spirits of wine, and directions were given to keep them constantly wet with iced water as soon as reaction was observed to take place." 163.

The patient lost very little blood, the circulation being sufficiently commanded by pressure in the groin, as Mr. Guthrie has very properly stated. Mr. Carmichael disapproves, of course, of putting the patient to the unnecessary pain of securing the femoral artery before amputation. We agree with Mr. Carmichael that the sponge is very often too roughly as well as too freely used to the surface of stumps, while searching for arteries. It gives pain at the time, and must exasperate the inflammation afterward.

The patient slept well the night after the operation. The second night was also tolerably good; the pulse was now 112; tongue moist but brown; bowels had been moved. She complained of a sense of tightness in the stump; but on removing the dressings, Mr. C. was surprised to find that the entire line of the wound had united. The third night was good. The ligatures were removed, and the integuments were found firmly adherent. The stump, however, appeared full and distended, and it was suspected that an accumulation of serum had occurred. In the evening she became alarmingly ill—pulse 130, with great restlessness and uneasiness. The stump had lost its heat, and appeared greatly swollen, as if distended by some fluid; but, on introducing a catheter through the newly formed cicatrix, not more than half an ounce of thin ichor followed. Cold applications discontinued, and wine prescribed. Fourth day, omnia exacerbata, and on the fifth, at noon, she expired. The following appearances on dissection we shall give in our author's own words.

"The fibrous structure of the muscles of the limb covering the diseased mass, which formed the tumour, was scarcely discernible, so attenuated were they by the pressure of the morbid substance which lay between them and the bone. This substance was of different degrees of consistence: in most places it exhibited a semi-cartilaginous appearance and hardness; while in others it was of a gelatinous structure, resembling boiled glue when congealed; the latter entirely occupied the cavity of the knee-joint, which was so distended with it, that on dividing the capsular ligament, and the ligament of the patella, it burst out as if it had been greatly compressed, occupying a much larger space when thus unconfined, and

exhibiting an irregular cauliflower appearance. Interspersed through the morbid substance above the joint were several cavities, each containing from half an ounce to an ounce and a half of a glairy gelatinous fluid; and in dissecting the tumour, the knife frequently struck against spicula of bone, which were afterward found to radiate in considerable masses from the femur.—This bone exhibited a white, rough, diseased appearance, denuded of periosteum from its lower extremity to the lesser trochanter.

"Upon examining the stump, which was done by separating the flaps that had united through their entire extent externally, a large spongy mass, not unlike a piece of unhealthy lung, presented itself. On cutting into it we ascertained that it was the divided muscles which were thus strangely altered in so very short a space of time; for during the operation they presented a healthy appearance. It was this swelling of the muscles which caused the tumefaction of the stump already mentioned; for scarcely any fluid came away previous to death, on the introduction of the probe or director.

"The little ichorous matter which did pass off was ascertained to come from the upper part of the wound, where there was a considerable cavity, the bottom of which was formed by the acetabulum. The viscera of the cavities were also examined, but nothing remarkable was observed respecting them." 167.

This is a disease described by Sir Astley Cooper and M. Boyer, the former terming it fungous exostosis of the medullary membrane, the latter osteo-sarcoma. This disease is not only dreadful in itself, as affecting an extremity, but very often so engrafted on the constitution, that the operation of amputation gives but a temporary respite from its ravages. We shall here introduce a case which lately fell under our own notice, and which will put the junior

strength was fast declining, and hectic fever was beginning to develope itself. Much diversity of opinion existed relative to the nature of the disease; but it was universally agreed that nothing but an operation could offer a prospect of life.

Operation, 13*th August*, 1816. The first incision (slantingly longitudinal between two large veins) half, or three quarters of an inch in depth, and five or six inches in length, disclosed nothing but unhealthy or gelatinous-looking cellular and adipose substance. The next incision went through the fascia, when a considerable quantity of blood and serous fluid boiled out from the turgid vessels of the tumour, a tourniquet being now moderately tightened on the thigh, near the groin. The deeper incisions developed a mass of disorganization, of various textures and appearances; some parts resembling cerebrum; some condensed cellular substance; some ligament; some jelly; some marrow; and some diseased fat. Throughout the greater extent of the tumour were interspersed very many cells, bags, or cavities, of extremely irregular shapes, filled with fluids, principally serum and coagulable lymph; but, in some places, coagulated blood, apparently recently extravasated; and in several of these sacs were found afterward, on more minute dissection, ill-conditioned purulent matter, very thick in consistence. The artery was traced (after the limb was removed) from the triceps, through the ham, to the leg, but was perfectly pervious and sound. The condyles of the femur were amazingly enlarged and diseased. They were spread to full six inches in breadth; and in some cases so soft, that the scalpel went through them, in all directions, without meeting more resistance than was offered by the circumvesting integuments. The cartilages of the femur were not abraded; but they readily stripped off the condyles of the bone, which were so rotten and soft underneath, that the finger could be pushed into them. The semilunar cartilages were apparently unaffected; but the crucial ligaments were rotten. The head of the tibia, especially on the inner side, was scabrous, spongy, and carious. The cartilage was abraded off the internal edge of the patella, and the bone itself was scabrous and diseased in that place. The articulating cartilages of the tibia were every where sound. The body of the femur was diseased and enlarged, for the space of eight inches from the joint. Towards the condyles it was soft and carious; but upwards, towards the middle of the bone, it was enlarged, and pretty hard. Several calcareous depositions were found scattered through different parts of this tumour.

"Two portions of the cerebroid substance were put, one into sulphuric acid, and the other into water. The *former* was soon dissolved, and formed a black, oily, homogeneous liquid; the *latter* rendered the water turbid, but did not dissolve.

"Mr. Burns mentions his having seen white swelling and fungus hæmatodes united in the same tumour; and the present case appears to confirm this assertion. Various were the opinions, both before and after the removal of the limb, respecting the nature of the

disease. Several able men, who had not seen the progress of the tumour, pronounced it aneurism, even on the day of the operation.

"The thigh was removed at the little trochanter, and half a minute's dissection would have liberated the head of the bone from the acetabulum. Would not this be a better plan of amputating at the hip joint, after all that has been said on the subject?—The girl recovered; but she nearly expired on the table. *Med. Chir. Journ. vol.* iii.

About eighteen months afterward the young lady died of an obscure internal complaint, and we had an opportunity of examining the body. A large tumour similar to the one above-described rose from the spine, pressed the heart towards the right side of the thorax, and so much encroached upon the lungs as to wear the unhappy patient out with dyspnœa, fever, and irritation.

ART. VII. *Case of Cynanche Laryngea, in which the Operation of Tracheotomy was performed with success. Also a Case of Abscess between the Œsophagus and Cervical Vertebræ, &c. &c.* By R. CARMICHAEL, Esq.

AMONG the triumphs of modern surgery, *successful* tracheotomy holds a distinguished place. These operations are now becoming very common. A life was preserved a few months ago, at Bartholomew's Hospital by this operation, under circumstances of inflammation which, some years back, would not have been thought remediable by tracheotomy.

more were applied. These measures produced not any relief. Five grains of calomel, and one-third of a grain of opium were ordered every third hour. As death was now threatened, Mr. Carmichael was called in, and immediately proceeded to the operation. We must here express our surprise that a young, robust, and plethoric patient should have been allowed to labour under acute inflammation of such a part as the larynx until tracheotomy was necessary, without ever opening a vein. We have no hesitation in asserting that the patient should have been bled to syncope on first entering the hospital—that *immediately* afterward the whole throat should have been covered with leeches—that the bowels should have been *briskly* acted upon—that the force of the vascular system should have been kept under control by digitalis and antimony—and that a blister to the sternum should have succeeded general and local bleeding. We know from experience that these measures have more than once arrested the progress of a more violent laryngitis than appears to have existed in the above case. Such decisive measures should never be omitted in this inflammation.

"The external incision (between the inferior edge of the thyroid gland and the sternum) was about an inch and a half in length, and the hæmorrhage was so inconsiderable that there was not more than half an ounce of blood lost during the operation; for owing to the steadiness of the patient, and a clear light, the large veins on the forepart of the trachea were distinctly seen, and avoided. The incision into the trachea was first made by dividing the membranous substance between two of the rings; then the inferior of the two was divided by a perpendicular incision, and this opening was enlarged by laying hold of one edge of the divided ring with a forceps, drawing it forwards, and cutting off a slice with a knife.—A similar piece being removed from the other edge of the divided ring, a square opening was left sufficiently large not only for the easy passage of air, but of mucus—a circumstance of the greatest moment with respect to the success of the operation, for if the opening should not be large enough to admit of the expulsion of mucus, a recurrence of a state of suffocation must ensue from its accumulation in the trachea and larynx, as there is little chance of its being expelled by the glottis, now that the patient breathes through the wound in the trachea. The removal of a piece of one or two of the rings, as recommended by Mr. Lawrence, is therefore, in my opinion, far preferable to the introduction of a canula, for the latter is not only a source of great distress, but is by no means equal to the other for admitting of the easy exit of mucus. If we are contented with merely dividing the membranous substance which connects the rings, recourse must be had to the canula, as the opening will soon become clogged with mucus in spite of all the efforts of the patient to expel

it; and for obvious reasons we should prefer a canula of as large a diameter as can be introduced." 175.

We do not quite agree with Mr. Carmichael in some parts of the foregoing quotation. In many cases there will be an absolute necessity for the canula—and that for a considerable time. In the case related at page 438 of the first volume of this series, the tube has been worn five years. In a case lately operated on in St. Bartholomew's hospital, we believe the tube was worn at least two months, if not more. We admit indeed that if the opening be made only between two of the rings, it will be too small; but we know that a longitudinal slit through a couple of rings will readily admit a flattened tube, especially if a piece of flattened bougie be introduced into the tube, so as to give it a blunt end as it were. The bougie is, of course, to be withdrawn so soon as the tube is in.

As soon as the trachea was opened the patient experienced inexpressible relief, and soon fell fast asleep, which continued most part of the night. Next day, however, the difficulty of breathing returned, and it was evident that the aperture in the trachea was not of sufficient calibre.

"The difficulty of breathing continuing to increase, a bistoury was introduced in the evening, by which the opening was enlarged upwards. The good effects of this enlargement became soon evident, for the patient lay down on her side for the first time since the performance of the operation, and slept soundly for two hours." 177.

From this time the patient progressively mended, and was discharged from the hospital in about three weeks after the operation.

Case II. This operation of tracheotomy was performed about the same time as the other, but was unsuccessful. On the 14th May, Mr. C. was summoned to the aid of a woman in the Dublin Female Penitentiary, whom he found sitting erect in bed, respiring with difficulty, and with a loud, stridulous noise, her head thrown back, and her chin brought forward, in a convulsive manner, at each inspiration. Her countenance was pallid, her skin below the natural temperature, and her pulse from 120 to 130.

Mr. C. learnt that the patient had complained of pain in her throat upward of a month, attended with difficulty of deglutition and respiration, for which local and general bleeding, blistering, and other remedies, had been tried by Dr. Mills, without affording relief.

"On examining the fauces, I could not perceive any swelling of the tonsils, or of the posterior part of the pharynx. The entire front

of the neck was, however, so much swollen, that it was impossible to feel the trachea; and even the larynx itself was scarcely distinguishable by the touch. She could not swallow more than a teaspoonful of liquid at a time, and even that with extreme difficulty." P. 182.

Seeing that suffocation was threatened, Mr. C. justly concluded that tracheotomy was the only measure to ward off death in the first instance.

"On making an external incision through the integuments below the larynx, an inch and an half in length, such a flow of blood took place as might be expected from parts in a congested and inflamed state: and on continuing the incision through the fascia, I found all the parts lying on the trachea considerably swoln, and pouring out blood at each stroke of the knife. I waited near half an hour, applying sponges dipped in cold water to the part, before the hæmorrhage ceased, when I proceeded to lay bare the trachea, to which I was directed by the touch, as my sight was of little avail, from the difficulty of throwing the light of a candle into a deep and narrow wound. I, however, succeeded under these embarrassing circumstances, in making an opening into the trachea, when an immediate suffocating cough succeeded, caused by the blood finding access into that canal, and which, mixed with bubbles of air, was forcibly expelled through the wound. The bleeding now continued half an hour longer, but as it evidently came from small vessels, I had no apprehension on this account; but the circumstance sufficiently shows the congested state of the parts in front of the trachea. When the bleeding ceased, which probably extended altogether to sixteen or twenty ounces, I left my patient considerably relieved, without attempting to enlarge the wound in the trachea, or even to introduce a canula, for fear of renewing the hæmorrhage." 183.

In the morning the patient was found much amended—her breathing free, and performed principally through the glottis. This tranquil state continued through the day; but in the evening the wound had nearly closed, and little advantage was gained by Mr. Carmichael's attempts to enlarge it by means of a probe. The difficulty of breathing returned. Mr. C. was obliged to enlarge the opening in the trachea with a knife, in doing which an artery was cut that required to be tied. A canula was then introduced, and retained without difficulty. The patient now respired with ease, but the most alarming symptom was her total inability to swallow even the smallest drop of liquid. She informed our author, by writing, that she was starving, and felt the most acute pain from hunger. An attempt to pass down an elastic tube through the nostril into the œsophagus failed. Enemata of broths, milk, and opium, were thrown up. She expired the next day, after being reported to have vomited up some purulent matter.

On dissection, an abscess, containing about six ounces of purulent matter, was discovered, extending from the second or third cervical vertebra as low as the sixth or seventh, situated between the bodies of the vertebra and the posterior boundary of the œsophagus, the walls of the abscess being firm and unyielding. The vertebræ, larynx, pharynx, and œsophagus were natural, as were also the lungs. It was ascertained that the thyroid gland, which was much swelled, had been wounded in the operation, and from this source sprang the hæmorrhage.

"The practical lesson we derive from this case is of the highest importance, for if I could have been aware of the existence of the abscess, a similar puncture into it would, in all probability, have saved the patient's life. About two years since, a case somewhat similar occurred at the Richmond Hospital; a young man was admitted, greatly reduced by previous disease; it was supposed that he laboured under secondary venereal symptoms, for which he had used mercury extensively; he complained of great difficulty in swallowing, attended with stiffness and immobility of the neck; the slightest attempt to rotate the head or raise the chin, was attended with acute pain. On examining the fauces there was nothing unusual; the obstruction was lower than this situation, and opposite the larynx; but every attempt to pass a sound was attended with such extreme pain and convulsive efforts, that all exertions in this way to remove the obstruction were found unavailing. The obstruction gradually increased to such a degree, that the patient could not swallow even a drop of liquid. His respiration also became impeded and croupy, and in this state he expired, but sooner than was anticipated, and rather unexpectedly.

"On examination it was ascertained, that an abscess situated on

should induce an examination with the finger; or if the finger cannot reach the obstruction, a gum elastic bougie or sound should be passed, and the obstruction will point out the situation of the abscess. If we are satisfied on this head, a curved trocar, somewhat similar to that recommended by Sir E. Home for puncturing the bladder through the rectum, may then be passed, the distance at which the sound met the obstruction being previously marked upon it; and here the stilet being made to protude, may be boldly plunged into the tumour, taking care to push it towards the central line of the bodies of the vertebræ, where no danger can arise from the puncture. If matter flows, we will save the life of the patient, but if we are disappointed, no material injury, that I can conceive, will be the consequence of the attempt." 190.

If the practitioner be timorous about passing a trocar down the œsophagus, a silver catheter forced into the abscess may answer the same end, and is more safe and easy.

The cases and observations brought forward in this paper by Mr. Carmichael, are interesting and useful, reflecting great credit on their author, as an operative surgeon, and as a zealous promoter of surgical science in general.

The next paper in this volume is a very interesting "Report of the South Fever Asylum, Cork, from December, 1817, to March, 1819, by William Pickels, M.D. one of the physicians." We should have been extremely happy to have presented an analysis of this paper to our readers, but we have dedicated so very large a space in this Journal to the subject of the Irish epidemic, that we really dare not introduce it in the present instance. We can bear testimony to the merits of the article, however, and we entertain a very favourable opinion of Dr. Pickels's talent for observation, as well as his judgment in treating the epidemic which he describes.

ART. VIII. *A Case of Gangrene, occasioned by the Use of Mercury.* By RICHARD GRATTAN, M.D.

DR. GRATTAN deplores it as the "peculiar misfortune of our profession," that the physician cannot pronounce with *certainty* as to the effect of medicines. We believe this misfortune is not so *peculiar* to our profession as Dr. G. seems to think. There is great uncertainty in almost all the *physical* operations going on in this globe. And as to the operations of *moral* causes, they are abundantly uncertain, as the politician, philosopher, divine, poet, and even

player, can testify! We agree with Dr. Grattan, indeed, "that we have, at best, but a faint glimpse of the truth, and that the instances in which we can decide with certainty are far inferior in number to those of which we are in a great measure ignorant." But while we acknowledge this with sorrow, we cannot approve of certain Socratic philosophers in our profession, who have lately laboured to make medicine one universal chaos of doubt, and by the same sublime and incomprehensible arguments by which they demonstrate the non-existence of a deity. Thus, if to a constipated patient you administer salts and senna, or calomel and jalap, and catharsis follows, the sceptical physician will laugh at your vulgar prejudice, in considering that as an *effect* which was a mere *coincidence*. How can you prove, he will triumphantly exclaim, that this relaxation of the bowels was not owing to the efforts of Nature or *a thousand other causes* than the medicine which you call a purgative? Certainly there is no answering these questions. But we believe, that if these men or this unqualified scepticism came to have any weight with the great body of practitioners, there would be an end to all progress in medicine—nay, it must infallibly cease altogether to exist. Men, however, will not, in general, be argued out of the plain evidence of their own senses by the refined speculations of these gentry, as the almost total neglect of their lucubrations pretty clearly proves.*

But to return to the case before us. A girl, ten years of age, was admitted into the Fever Hospital, having been complaining for some weeks previously, but without exhibiting

any well marked evidence of fever. "She became weak and languid, her appetite had declined, and her flesh had fallen away." The child, when visited, obviously laboured under febrile excitement, and appeared to be in the last stage of disease.

"The head seemed to suffer most, and from her general appearance I was led to conclude, that water either had collected in the brain, or was on the point of being effused into the ventricles. Delirium with frequent screaming, alternated with occasional intervals of stupor or heaviness, black dry tongue, pulse seldom under 130, beating of the temples, face sometimes pale and sometimes flushed, were the most prominent symptoms. A two grain pill of calomel was given, succeeded by a draught of the oleum ricini. Leeches were applied to the temples, and the head was shaved. The symptoms were not improved. The temporal artery was then opened, five ounces of blood were taken, and a blister applied to the occiput and nape. A pill, consisting of two grains each of calomel and ipecacuanha, was given twice, and sometimes thrice a day, with the exception of those days on which oil draughts were administered, so that by the end of the sixth day after admission, ten pills had been taken. The gums now became sore, and every alarming symptom disappeared." 239.

Copious ptyalism followed—gangrene took place in the cheek—and the girl died.

While peculiarities of constitution are to be borne in mind, we do not think that such exceptions as the above are to at all deter us from that practice which general experience points out to be useful and safe. We agree, therefore, with Dr. Grattan, that—

"Were we to anticipate in every other case a similar result, our practice would become so vacillating and timid, that a great proportion of our patients might die through our hesitation in employing an active remedy until we had first satisfied ourselves by cautious experiment that it was not likely to prove injurious. A few exceptions ought not to preponderate against the great majority of well-established cases, in which a particular treatment has been safely and beneficially adopted." 242.

The species of gangrene described above is not always the consequence of mercury.* Among the children in the wards of the House of Industry, a few rare instances of a similar gangrene of the cheeks were observed, and termi-

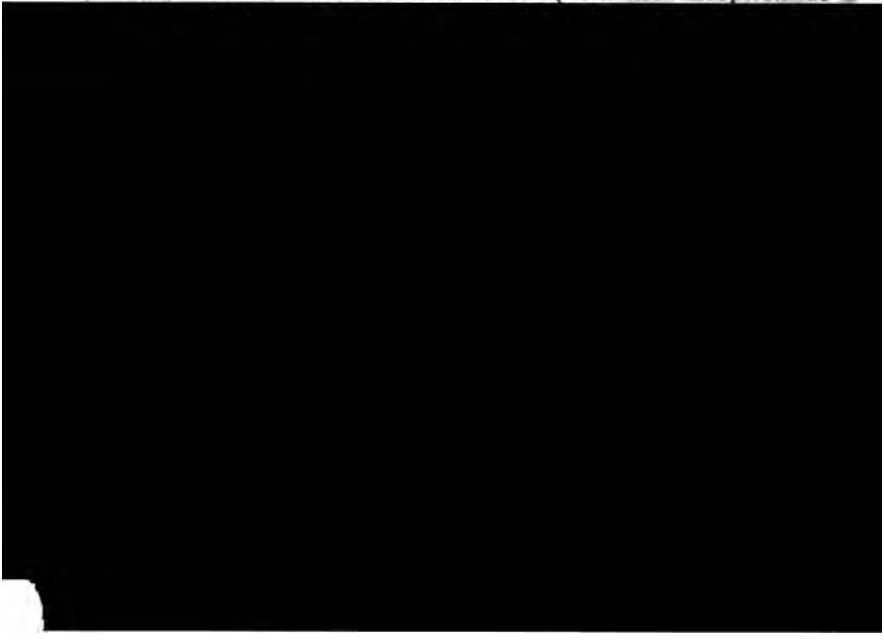
* A small vesicle first appeared at the angle of the mouth, which, in a short time, assumed a black colour, and, in a few hours, increased to the size of a sixpence. It was unaccompanied by the slightest perceptible inflammation or pain.

nated fatally, without any mercury having been given. "In children of a scrofulous habit, gangrenous ulcers have appeared in a day or two after the application of a blister."

ART. IX. *A well-marked Case of Liver-Cough, with some Cases and Observations, &c. &c. &c.* By WILLIAM BROOKE, M.D. M.R.I.A. &c.

THE connexion between the lungs, the liver, and the stomach, is now universally remarked by all observant practitioners. A stomach cough is familiar, even among nurses and old women, and the sympathetic irritation of the respiratory apparatus from disorder of the biliary organ, though less frequent, is not less remarkable when it occurs.

The subject of the present case was a boy, twelve years of age, who was placed, October 1818, in one of the large schools in the north of Ireland. He was a hardy, healthy boy, accustomed to exercise, particularly on horseback. In about a month after, he was seized with a severe and very frequent cough, for which (it not yielding to the usual family remedies) medical assistance was called in. He was bled from the arm, blistered, vomited, purged, expectorated, sweated, and opiated, without relief. He was then, as is usual on *such* occasions, prescribed change of air, which removed the complaint. In January, 1819, he returned to the school, and the cough returned, though in a milder degree than before. The same remedies (with the exception of



weary, and felt a general soreness in the muscles of the thorax and abdomen. This monotonous cough was repeated three times very rapidly, he then fully inspired, and coughed as before; and again for the third time inspired and coughed. After this he became quiet for some time, the interval varying from one or two minutes to four or five; so that each paroxysm may be said to have consisted of three distinct inspirations and nine expirations, the air taken in by each inspiration being expelled by three coughs or ejaculations as above described." 250.

Several remedies were prescribed during the ensuing four days, but without relieving the cough. On the 14th February, he complained to our author of pain in the right hypochondrium, and, on examination, he discovered "a tumour occupying a space that might, in circumference, measure about four inches, which was very perceptible to the touch and sight, situated below the points of the seventh and eighth ribs." He had had no rigors, nor any febrile symptoms, except a white and furred tongue. Leeches, fomentations —mercury night and morning. This treatment (mercurial) was continued five days, without any material benefit, except that the acute pain was removed by the leeches, a soreness still remaining. He still coughs all day, and sleeps all night. A blister was applied, and pil. hydrargyri with gum ammoniacum was given every night. "The bowels were in a soluable (soluble) easy state, and the discharge from them, as well as the urine, appeared quite natural." On the 1st March, the cough became a little mitigated, and the tumour subsided. His mouth was sore, and the tongue coated.

"I omitted the mercury, and ordered some infusion of senna, with manna, sulphas kali, and tinct. jalappæ. The quantity of fæces brought away by this purgative was truly surprising, and so peculiarly offensive, that they could not be kept in the house a minute. The tongue immediately became bright, and from that day he has never coughed once." 255.

With all deference to Dr. Brooke's superior judgment, we must beg leave to dissent from the view which he has taken of this case. We do not think that there was any disease of the liver through the whole course of the complaint. From some little experience in organic affections of that viscus, we know that a tumour of the size described above would not have been removed in a fortnight, if indeed it could ever be removed. We are aware that the general volume of the liver may be enlarged by a gorged state of its vessels and ducts, and that such a state is sometimes quickly reduced by the proper means. But a circum-

scribed tumour is a very different affection, and for the most part totally incurable. In our own minds we have not the smallest doubt that the *fons et origo mali* was a lodgement of fæcal matters in some of the flexures of the intestines—most likely in the angle of the colon between the ascending and transverse arch. The apparently *soluble* state of the bowels is nothing. They will appear soluble for months, while obstructions are still existing, and keeping up irritation in the primæ viæ, with all the anomalous symptoms which such irritations are so capable of producing. There is a vast difference between partial and total obstruction of the intestinal canal. The *former* will give rise to a host of anomalous symptoms—the *latter*, to ileus or enteritis. We would just ask Dr. Brooke why, if an apparently "*soluble state*" of the bowels were proof that no accumulations existed, yet that some salts, senna, and jalap, brought off a "quantity of fæces truly surprising, and so peculiarly offensive that they could not be kept in the house a minute?" From the moment that this mass was disgorged too, the boy never coughed more. A few weeks ago we were suddenly summoned to an old lady, who was considered to be dangerously ill. She had constant vomiting—furred tongue—such tenderness over the region of the stomach that she could not bear the slightest degree of pressure—quick pulse—hot skin. She asserted that she kept her bowels regularly and daily cleared by soap and rhubarb pills prescribed by an eminent physician of this metropolis. Well—here were the prominent characters of gastritis. Leeches were therefore applied over the epigastrium, and effervescing draughts were exhibited to allay the gastric irritability. When the leeches had acted, she could bear a little more examination; and now we discovered a solid ball or tumour occupying the centre of the epigastrium, and the right hypochondrium—very hard and very tender. Our minds were immediately made up, as to the nature of the complaint. A grain of opium, five of calomel, and ten of extract of colocynth were exhibited in pills—and pills composed of colocynth and calomel were administered every four hours afterward. In the evening of that day a catharsis commenced, and two large pôts were filled with pellets and balls of hardened fæces, of various sizes, from that of a musket ball to that of a pea. The tumour disappeared, as did the gastric irritability, foul tongue, and pyrexia; from that hour the old lady was well. We caution junior brethren, therefore, against being deceived by accounts which their patients give them of the free state their bowels: since we have, in numerous instances, fo

great accumulations taking place, notwithstanding daily evacuations from the intestines producing such proteian and anomalous disorders, in distant parts of the system, as were well calculated to draw off attention from the real root of the evil.

We do not deem it necessary to follow Dr. Brooke in his commentaries on this case, and on liver-coughs in general; because we consider the basis itself unsound, and consequently the superstructure unsafe. We were also grieved to find him repeatedly quote, and prop up his opinions by, the worthless puff of a London Quack, with whose book or person no regular physician in this metropolis would be seen.

ART. X. *A Case of Erethismal State of the Brain.* By WHITLOCK NICHOLL, M.D.

Our readers know that we gave an analysis of Dr. Nicholl's publication on this subject in our last number. The present paper contains a detached case illustrative of many points therein discussed. As the case is short, and as we cannot well abridge it, we shall give it in the author's own words.

"Mr. Acton, a very intelligent surgeon of this town, has an infant daughter, who is between eight and nine weeks old; she was, from her birth, lively, very wakeful, scarcely ever sleeping during the day; highly sensible to impressions; when she was scarcely six weeks old she awoke as with a hesitation of breathing, and the muscles of the face were convulsed. She became still more restless, and was very fretful. Nothing amiss had ever been noticed in the character of her stools. She was suckled by her mother, a very healthy young woman. Her father gave her a dose of calomel, and put her into a warm bath; the stool which succeeded to the exhibition of the mercurial purgative was perfectly healthy. After this I saw the child; it started when the door was opened, or when a chair was hastily moved, or when any one coughed, or if any part of its body was touched. It cried very much, and very loudly, and was only appeased, and that momentarily, by being placed in a sitting posture, by being carried about, or by being put to the breast. The pupils were of a natural size; there was no vomiting; no heat of skin; no heat of the head; no flushings of the cheeks; no increased throbbings of the arteries of the neck and head. When this highly sensitive and wakeful state had continued for several hours, the child became gradually more heedless of noises, until, at length, it ceased to notice them; the crying then subsided, and the child bore a horizontal position. In this state, the eye appeared as if insensible

to the light of a candle; the pupil, which was rather enlarged, vibrating, as it were, between contraction and dilatation when strong light was thrown on the eye; the fore-arm bent on the arm; the fingers clenched; the thumb laid flat across the palm; the upper extremities, in this state, raised, in constant motion; the head sometimes moved about, but not much so; the lower extremities sometimes suddenly drawn up; the lips moving; no moaning; occasional rolling of the eyes; the eyes fully open; not a moment in which some muscles were not in quick action; the body bent backwards. When this state had continued for four or five hours, sleep came on, out of which the child awoke, and appearing in its usual state; its arms pliant; its hands open; then came on the fretful, crying, restless state; then the torpid restless state, during which the muscles were in constant action; the fore-arm bent; the fingers clenched as before; then sleep; after which, apparent recovery. And thus did the sensitive erethismal state, followed by torpid erethism, by sleep, by recovery again, repeatedly run its course. The brain, after the highly sensitive state had been long kept up, gradually assuming a state approaching more and more to torpor, until its actions were at rest, and then was sleep present; but after a short rest, the brain AWOKE to its original state. It was remarked, that when the sensitive state of the brain recurred, the bowels were relaxed, notwithstanding the use of opium; the eyes were suffused; the child sneezed, and had an increased quantity of moisture in the nostrils, and of saliva from the mouth: when the sensitive state declined, the bowels were no longer relaxed; the coriza disappeared, secretion having been increased by the erethismal state. At one period, during the torpid erethismal state, there was complete opisthotonos, to a great extent, so that the spinal brain was affected also with the erethismal condition.

"The head first of all was blistered; during the state of opisthotonos, the whole of the spine was blistered. The application of the blister to the spine appeared to give much relief, especially by its first operation; afterward it was thought to irritate too much. A grain and a half of Dover's powder was the remedy always resorted to: if given during the highly sensitive state, it allayed the irritation, and when given during the more torpid state, sleep gradually came on. In one instance, the fretful and the sensitive state and the more torpid state occupied two nights and the intervening day, during the whole of which time there was scarcely any sleep—none for a longer period than a few minutes, then sleep came on, which lasted several hours. The Dover's powder generally quieted the child in three or four hours; a tea-spoon full of syrup of poppies had no effect at any time. Musk had no effect. The muscular actions generally came on at night. I gave decoction of bark in one of the intervals, a tea-spoon full every hour; I thought that this combined with the p. ipecac. c. had a slight good effect; but it was not followed up, as Mr. A. thought that the child was in pain after taking it. James's powder made it sick. After the child had continued about a fortnight in this state, the train of symptoms being repeated

every day, or every two days, it has continued for the last fortnight without any marked symptom of disease, being better than it has been since its birth; yet there is still an absence of sleep during the day; so that I suspect that there exists some congenital formation of the cerebral structure, which is incompatible with the long duration of health, and perhaps, with that of life. The case as yet has been a well marked one of pure erethism, unmixed with the slightest perceptible alteration in the state of the blood-vessels, and alternating with a more torpid state, which is the consequence of the previous highly sensitive state." 273.

On the above case we do not feel inclined to remark farther than that we do not feel quite satisfied with the explanation of the phenomena, as referred to an erethismal state of the brain. We strongly suspect that the source of the complaint was in some part of the *primæ viæ*, and that the brain and nervous system suffered sympathetically. It is but a conjecture, however, on both sides; and therefore we shall not press the matter farther.

ART. XI. *Case of Melena.* By Dr. NICHOLL.

A HIGHLY delicate and nervous female, married, and the mother of a family, had laboured under severe cough and pain in the chest, so as to threaten phthisis. She was relieved from these, but was afterward attacked with vomiting and diarrhœa, which continued some days, during which she could not sleep. When Dr. Nicholl first saw her, (27th June, 1820) she was extremely languid, pulse from 115 to 120, stools liquid and frequent, fulness of the abdomen, tongue moist and white. She had been taking hydrargyrus cum creta with saline medicines, which were ordered to be continued, with the addition of rhubarb and confectio opii, in small quantities. Two days after this the patient was affected with an unaccountable state of wretched agitation and terror, attended with profuse perspiration, coldness of the lower extremities, thirst, quick full pulse, and dry tongue. After some hours she became tranquillized, and next day seemed much better, the stools having a more healthy appearance. In the evening of the 30th, however, a recurrence of the same unpleasant symptoms took place, with an insuperable dread of sleep. She passed two large evacuations of liquid bile, with a considerable quantity of blood, the abdomen being very full, but free from pain on pressure.

"On the next morning (July 1st) I visited her at 8 o'clock. I found her in a state of great anxiety, repeating that she must die, but

that she cannot die; her face pallid; the nose flattened, sharpened, white, and almost transparent: the pulse jerking and throbbing, beating 130 times in the minute. She had passed a very large quantity of liquid stool; that which had been voided in the preceding evening had a more decided tinge of red, and contained black grumous clots; the stools which passed on the morning of this day (the 1st) were perfectly black, thin, and watery: the whole of them were of an inky black, entirely inodorous, and free from even a vestige of fecal matter. She had passed several pints of this fluid, and it continued to come away very frequently." 277.

At nine o'clock a draught, composed of ol. tereb. half a drachm, syrup of poppies a drachm, peppermint water an ounce, followed by a clyster containing an ounce of turpentine oil. This came away in an hour, untinged with red or black. At noon the draught, and at three, p. m. the clyster repeated. These medicines were reiterated several times, but no more melena. The patient gradually, but slowly, recovered.

"Not a particle of discoloured matter passed from the intestines from the moment in which the turpentine was first injected; although up to that moment the fluid *nigricantis picei coloris*, and *tetri atri coloris*, as Hoffman terms it, passed away almost continually." 279.

Melena is, undoubtedly, at all times an alarming disease, and, as Hoffman terms it—truculentus et ad sanandum difficilimus; it is therefore interesting to see it checked by remedies, and thus certifying the power of medicine over a formidable malady.

occupied two hours, and was accomplished with great difficulty, the patient being very unmanageable, and requiring several people to keep her in bed. During the night after the operation she had several hours' sleep, and made no particular complaint. On the following morning one of the attendants perceived a substance, about six inches in length, of a smooth shining appearance, hanging from the external passages; and taking it to be some of the membranes, contented herself with passing a portion of rag through the *loop* which it had formed in its descent. No passage through the bowels, though opening medicine had been taken. The 1st of August passed also without complaint, except great soreness of the parts, the bowels, however, remaining obstinately confined, in despite of repeated purgatives. On the 2d of August force was injudiciously used by the nurse to pull away the supposed membrane.

"From this moment a train of the most formidable symptoms set in, her abdomen swelled up, and became excessively painful, she had incessant vomiting, with occasional hiccup, and she complained much of pain, which she described of a dragging, lacerating kind, in both iliac regions. In this state she continued, with but little variation of symptoms, until the Friday following, when I saw her for the first time. It would be difficult to conceive a more melancholy or distressing picture of human misery than she at this time presented; her belly was much swoln, and excessively painful, so much so that she could scarce bear the pressure of the bed-clothes; her stomach rejected even the mildest articles of diet; bowels obstinately costive; pulse small, intermitting, and tremulous; countenance pale, and extremely anxious: in short she had every appearance as if a few hours, at farthest, would put an end to her sufferings. On raising the bed-clothes for the purpose of examining the precise state of matters, I found, in place of the alleged portion of membrane, near a yard and a half of her bowels coiled up under her, black, and to all appearance, putrid; exhaling a shockingly offensive odour. The cylinder of the intestine was in many parts so incomplete that the finger could be freely passed up and down through the rents." 285.

In this deplorable state, the prognosis was, of course, most gloomy. Reduction of the intestine was impracticable as well as improper—in short, nothing could be attempted but that of palliating symptoms. The saline mixture with small doses of tinct. opii, also three grains of calomel with half a grain of opium, were ordered every four hours—the abdomen to be fomented—and a little wine for drink.

Next day, although pressure was better borne on the abdomen, yet vomiting, hiccup, constipation, cold extremities, collapsed face, cold perspirations, seemed to announce the

approach of death. The remedies were continued. Two days afterward, however, Dr. M'K. was gratified to find that the mortified portion of intestine had come away, and that the patient was relieved from all the threatening symptoms. In a short time after this she had a copious discharge of fæces *per vaginam*. The medicines were continued. She rapidly recovered, with the exception of the artificial anus. Facts of this kind are calculated to inspire hope where reason would despair.

ART. XIII. *A Case of diseased Heart, in a Patient who had suffered severely from Acute Rheumatism.* By DANIEL FALLOON, M.D.

THIS is one of those melancholy cases of hypertrophia or thickening of the parietes, with dilatation of the cavities of the heart, and pericardiac adhesion, which have, of late years, pressed so much on the attention of the profession. Like many of them too, it was relieved—much relieved, *pro tempore*, by proper plans of treatment, and when appearances were most promising, disappointed the hopes of patient and practitioner.

The subject of the present case was an industrious mechanic, 43 years of age, of regular habits, but too anxious about his family, in consequence of which he was in the habit of working at his business till one or two o'clock in the morning. He had also suffered from two most severe

then fluttering; it would then give two or three very strong beats in tolerably equal time, and again proceed in the same irregular and fluttering manner. The action of the heart was observed to proceed in the same irregular manner. He was much harassed with cough; breathing oppressed, but the inspirations could be made deep; appetite not very bad, but he was always worse after eating; bowels kept open by the pills; urine very scanty and high-coloured." 293.

Our author, after giving the patient some gentle opening medicine, ordered twelve ounces of blood to be taken from the arm, his food to consist chiefly of weak chicken broth, in small quantities, with a little stale bread or toast. Having borne the bleeding well, the operation was repeated for four successive days, all which he bore without inconvenience, the blood exhibiting the most decided marks of inflammation. After the third bleeding the urine became more copious, and the œdematous swellings began to subside. In short, for many months this afflicted patient's complaints were signally mitigated by bleedings, quietude, aperients, diuretics—particularly a combination of calomel, squill, digitalis, and opium, proportioned according to symptoms. His pulse became comparatively steady, being sometimes down to 56 in the minute. After various revolutions of better and worse, he died on the 29th October, 1819, nearly nine months after he first became Dr. Falloon's patient.

On dissection the lungs were found sound on both sides, but adherent to the pericardium—some fluid in each cavity—the heart adherent to the pericardium—the heart itself about thrice its natural size—all the great vessels much dilated—the parietes of the left ventricle much thickened—the auricles proportionally dilated as the ventricles—the heart, when freed from its appendages, weighing 34 ounces—traces of sub-acute inflammation observable on the inner surface of the pericardium—nothing particular in any of the other viscera.

Dr. Falloon has somewhat needlessly extended the details of this case to nearly twenty pages of letter-press. We do not think it an uninteresting case—far from it—but we believe that we have not omitted any part that was worthy of commemoration—if we except an application of leeches to the epigastrium, which relieved the tenderness there, and quieted the gastric irritability. To the readers of this Journal we need not say how often we have recommended this mode of depletion, in cardiac diseases, as preferable to venesection. The suffering organ, in these complaints, is so near the surface of the chest, that local depletion has a

marked and beneficial effect. To this measure, in conjunction with quietude, diruretics, and anti-sanguific regimen, we must almost entirely trust.

XIV. The last article which it is necessary to notice in this volume contains an account of a man to whom oxymuriate of mercury was administered, with the intention of poisoning. The case is stated succinctly by Dr. Charles Lendrick. About half a drachm of the oxymuriate had been swallowed, and was soon followed by the usual symptoms—intolerable pain and heat in the œsophagus and stomach—cold extremities—quick, feeble, and intermitting pulse. An emetic produced no good effect—but the exhibition of whites of eggs, beaten up with water, proved completely successful, and the patient was saved.

The two concluding articles of the volume are on fever—one by Dr. Grattan, reviewed in the first number of this series, page 139, *et seq.* The other a very able report of the Fever Hospital and House of Recovery, Cork Street, by Dr. O' Brien, which we regret our limits will not permit us to notice in this place. We hope to have some other opportunity of paying our respects to it, when the subject of fever is before us.

We have now, we hope, done justice to the third volume of these Transactions, by making known its contents through every quarter of the civilized world. Our readers will have perceived that the work maintains its own interest, and

that little has been effected in respect to a knowledge of the nature and treatment of this disgusting disease, we have (besides the evidence of our own senses) the authorities of Alibert and Bateman—the former the greatest dermologist of the present day. "Que trouve-t-on," says Alibert, "dans les auteurs touchant la nature et le caractère specifique des *teignes?*—Des renseignemens incertains, des dissertations vaines, des details vagues." Bateman says that this unmanageable form of porrigo often continues for several years. "Whether the circles remain red, smooth, and shining, or become dry and scurfy, the prospect of a cure is still distant —for the pustules will return, and the ulceration and scabbing will be repeated."

Most of the forms of porrigo being contagious, the disease is propagated, by means of schools, to a great extent, even among the higher classes of society; and consequently it becomes a subject of no trifling interest to the practitioner, who, being often foiled in the treatment, has sometimes the mortification of seeing the patient placed under the care of another, and not unfrequently put into the hands of a Charlatan. On this account, we shall be excused in going farther into the subject than is usual in Journals or Reviews, especially as some of the sources, whence we shall draw our information, are inaccessible to the great majority of our readers.

Mr. Plumbe, who has lately directed much attention to the disease under consideration, introduces, in the first chapter of this work, some ingenious remarks, anatomical and physiological, on the hair and integuments which it covers. It has been ascertained that the hairs have their origins completely beneath the under surface of the cutis of the scalp. The layer of adipose membrane *there* appears partially interwoven with the inner surface of the integument, and firmly attached also to the bulbs of the hair, which seem to be implanted therein. The hair then would seem to be independent of the cutis, as far as regards its nourishment—the cutis, a vascular and highly sensible structure, being merely penetrated by the hair, which appears to draw its support, and also the oleaginous secretion covering it, from the adipose structure beneath.

"The fact that the scalp is pierced by the hair, and has little or no share in its production or nourishment, I am particularly desirous of pressing upon the attention of my readers. Reasoning from analogy we should be justified by this consideration only, in concluding that the latter *may* possess when the former is in a state of disease, all the properties of extraneous substances. As regards the common ringworm of this part, it will be uniformly found

evincing these characteristics in the mildest as well as most severe forms of the disease." 18.

Mr. Plumbe, in his 2d chapter, commences with *porrigo scutulata*, omitting altogether the porrigo larvalis, or crusta lactea, as not naturally belonging to this class of diseases, either as to character or cause.

1. *Symptomatology.* According to Mr. Plumbe, the falling off of the hair is usually the first symptom which discovers the disease. When the scalp is examined, under such circumstances, it exhibits a somewhat scurfy and slightly reddened appearance. The remaining hair of the diseased part is thin, and irregularly scattered over it; the greater portion appearing to have been broken short off near the scalp, their roots still retaining their situation. Those which remain generally drop off if friction be applied. These are the primary appearances, the achores, or minute straw-coloured pustules, not being necessary, Mr. P. thinks, to constitute the disease, as they are not seen till later, when some degree of itching and irritation of the part has been felt.

"Though the achores mentioned by different authors who have preceded me as being the most important feature of this disease, are not seen at its first commencement, they are usually soon making their appearance after the hair begins to fall off. The itching and irritation commencing at the same time, the child who is the subject of it soon ruptures a few of them, and spreading by the frequently repeated application of the nails to the spot, their contents cover the adjacent parts of the scalp, extends the disease with great rapidity upon it; the same destruction of the hair and subsequent pustulation marking its progress.

"When pustules are noticed, they are uniformly found with hairs growing through them; and if the disease has existed for a considerable length of time, and destroyed the greater part of the hair of the part, such pustules are found proportionately reduced in number; but still surrounding the few straggling hairs which remain: each single minute pustule appearing to be dependent on the hair in its centre.

"If the hair, as sometimes happens, be completely eradicated from the spot where the disease first appears, the skin assumes an apparently healthy character: the disease, as regards this particular spot, may be said to have exhausted itself." 23.

That the disease when once formed on the spot spreads only to a small extent, by the application of the infectious matter, (and not from the mere communication of the specific action of the vessels of the part to those adjoining,) is,

Mr. Plumbe thinks, an important fact in the pathology and treatment, since, if it be admitted, (and he thinks no doubt will be entertained by those who attend minutely to the progress of even a single case,) it will be obvious that the present routine management, as regards applications to the part, is inefficient or futile, since it is not to be expected that they can neutralize or decompose the specific infection secreted from the parts. "The common attentions of a cleanly nurse are infinitely more effectual, and that for obvious reasons, in this hitherto terrible complaint, than any medicinal application whatever, where cleanliness is neglected."

The assertion of Dr. Willan, that all the different species of porrigo may be produced from the same contagion, is questioned by our author, as not according with his observations.

Not only have the results of the common accidental occurrence of the different species of the disease afforded proofs of the contrary, but experiments instituted for the purpose have invariably supported the opposite conclusion." 27.

The porrigo larvalis, or crusta lactea, is acknowledged by Dr. Bateman to be non-contagious, and so far as our author's experiments have gone, it appears probable that the p. scutulata, furfurosa, and lupinosa *only*, are the results of one specific contagion, the points in which these differ from each other being of very small importance. The porrigo decalvans is of such rare occurrence as to render it difficult to form a decided opinion respecting the mode of its production.

The nature of p. favosa is better ascertained. "In no case," says Mr. Plumbe, "does this form of the disease appear by infection, to produce either of the other species. Whether the matter secreted be inserted under the cuticle, or simply applied by friction, the same favous pustule is produced as the original." It is almost needless to remark that ringworm of the scalp, the disease now under consideration, is very different from what goes by the same appellation on other parts of the body. This last rarely shows pustules, and never vesicles or tetters; but is usually marked by a lightish redness of the spot, and slight exfoliation of the cuticle. "The centre of the patch appears to have lost the greater part of this covering, while a morbid accumulation of it marks the extension and line of margin of the disease." The ung. hyd. nit. diluted with the cerat. superacet. plumb. we have found the most effectual remedy

in this last cutaneous affection, assisted by frequent ablution with soap and water.

The statements handed down to us of the effects of p. scutulata, &c. altering the colour and strength of the hair, Mr. Plumbe thinks, are contradicted by daily experience, as, whatever may be the effect produced on the hair growing on the part at the time, the structure secreting the hair is not affected by it, and when the disease is subdued, the hair will grow strong and healthy as ever, especially after being once or twice shaved. When extensive ulceration of the scalp has been produced by mismanagement or neglect, the case is materially altered. Then the production of new hair will, of course, depend on the degree of mischief which the parts secreting it may have sustained. Mr. Plumbe considers the porrigo scutulata, of course, as a *local* disease, quite independent of constitutional affection.

Without advocating such barbarous modes of practice as the pitch-cap, formerly in use, Mr. Plumbe thinks the said practice was founded in a just principle.

"The removal of the hair by the roots, where the pustules of the disease has loosened them, is a method absolutely necessary to the speedily checking it; but it is obvious enough that the forcibly drawing off the pitch-cap, must equally draw up the roots of the sound hair to which it is attached on the adjacent parts." 41.

The separation of the hair round which any pustule is discovered, is productive of little or no pain, and is readily accomplished by a pair of small forceps.

Mr. Plumbe observes that the term "scalled head" has been rather too indiscriminately applied to porrigo favosa and different stages of p. scutulata, though a distinction between these last is highly necessary for the purpose of successful treatment. Mr. Plumbe suggests the restriction of "scalled head" to the advanced stages of p. scutulata.

"Notwithstanding the absence of that copious exudation of fluid even in the most advanced stages of the scutulata, which marks the favous species, and the existence of many other very important differences in the two diseases: the same methods of treatment are still inculcated by the majority of those who have preceded me, as applicable to both. If medical men, taking on themselves the characters of authors, will continue to propagate ideas unsupported by actual attentive observation of the diseases on which they write, as guides for their professional brethren; and it is to be lamented that this has been much too often the case; confusion and mischief must necessarily arise: and in this particular case, a practical man would have no hesitation in denouncing an author of this descrip-
[illegible]

II. *Treatment of P. Scutulata.* In this important part of the subject our author conceives that he can derive little assistance from those who have preceded him. Considering the discharge from the numerous minute pustules, (continually forming,) as capable of producing or extending the disease to sound parts in the neighbourhood, Mr. Plumbe's preliminary step is to effect the evacuations of as many of the pustules as possible, by pinching up the skin between the finger and thumb, and carefully washing away what is thus forced out. Previously, however, to this operation, all hairs are to be plucked out, *which come away readily and without pain*, a precaution which he deems necessary whether pustules have formed in great numbers or not. Shaving the part, though proper in all cases, after the loose hairs have been removed, is no effectual substitute, Mr. Plumbe thinks, for the extraction alluded to. The loose hairs removed, and the pustules evacuated,

"Some astringent application, possessing *the power of taking from the secretion its infectious properties; and, at the same time, sufficiently powerful to constringe the vessels from which it flows, and lessen its quantity*, may be made use of.

"A solution of the sulphate of copper has been employed in some cases for this purpose. I believe the object to be more completely accomplished, however, by rubbing this preparation in a finely powdered state on the part, and then washing it off." 63.

The extraction and shaving of the hair usually produces some inflammation and production of a few more pustules, unless some sedative applications are used for a day or two.

A careful examination should be instituted every morning, and if any pustules appear, they should be removed at once by the sulphate of copper, as at first applied.

"After two or three repetitions of this application, no fresh appearance of pustules take place, and the circle of the disease is marked by small thin scabs of a darkish colour, and the same characteristics in other respects as the common exudation from abraded surfaces of the cutis. These scabs separate in a few days, bringing with them a few of the remaining hairs which have separated, and leaving a shining red and irregular surface, which gradually loses its inflammatory character, having now and then a little scurf forming on it till the new hair begins to appear." 64.

Sometimes it happens that, when the new hair is quickly reproduced, after the disease has been subdued, the excitement it occasions is followed by a slight fluid secretion concreting into minute scabs, retarding the production of a strong and healthy cuticle. Where numerous pustules have been formed, we need hardly expect a strong and healthy

crop of hair in less than six weeks or two months:—at the end of three months it will usually have attained its original strength.

Mr. Plumbe animadverts on the assertion of Willan, that extraction of the hair does more mischief to the scalp in one day, than the disease, if left to itself, would effect in three years, where cleanliness is observed. He thinks this cannot be true, since "the organic structure producing the hair is neither drawn out with it, or sustains any mischief by the violence employed.

"With due deference to the author in question, I should answer this interrogatory by asserting that the disease itself, *may*, under mismanagement and neglect, become a means (by subsequent ulceration) of inflicting a permanent and irreparable injury to the scalp: but that the forcibly drawing out of *every hair*, sound or unsound, is not adequate to the production of any effect on the part beyond a temporary privation of this necessary covering." 69.

At the same time our author deprecates the idea of forcibly depilating the scalp by tearing off the pitch-cap, dragging with it the sound and unsound hair, together with the scabby secretions of the tender and irritated surface—"inflicting as much pain as the most resolute of dispositions can support." "From all these inconveniences the use of a pair of forceps is perfectly free;" as they are applied only where the disease exists, and to hair already loosened, the slightest degree of force being sufficient to remove them.

Mr. Plumbe observes, that a considerable period must

length of time to have produced, under common circumstances, an effectual check to inflammatory action. Still the redness and heat of the part remained obstinate, and where a few straggling hairs were seen, a constant production of new pustules were discovered, as fast as others were removed. A total extirpation of the remaining hair over the whole surface was eventually accomplished; the ulcerated portions healed; and the fluid secretion diminished; the inflammatory redness and heat of the part continued however; and around the healthy margin, new pustules and scabs affecting the sound hair were every day appearing.

"The preceding applications, with others of various descriptions, were changed one for another without success, till a small spot, whence the hair had been first removed, was occupied by fresh; and immediately after pustules appeared among it. It appeared now, that any further attempts to get rid of the disease would be frustrated by the increased irritation of the new hair, which might be speedily expected to spring up over the greater part of the surface; but except on the spot I have mentioned, no more hair appeared; and I was led, shortly after, to endeavour to apply pressure by means of adhesive straps and bandages, with the cold lotion in conjunction. By the diligent application of these for two or three weeks, a material change was produced; and the scalp began to assume an appearance more nearly approaching to health. To completely subdue the diseased action was a work of much time; but I had the satisfaction of seeing eventually, (as I have already stated in a previous allusion to this case) the part completely covered with long and glossy hair." 74.

In other cases of similar character, and of four and six years standing, Mr. Plumbe has experienced proportionably less obstinacy; "but in no single case has the plan last mentioned (pressure and cold applications combined) failed in subduing the disease." In the majority of these cases, the extraction of the hair was necessary, in consequence of the obstinate repetition of the pustules, where any hair appeared on the diseased surface.

The foregoing description of the local treatment comprehends every thing on which our author is able to speak with decision, and from personal experience. The application of greasy substances not having the power (and none have) of destroying the infectious properties of the pustular discharge, Mr. Plumbe cannot approve, for he has frequently seen the disease spread with greater activity, after such applications.

Mr. Plumbe cannot agree with Mons. Alibert, in affixing a constitutional origin to all kinds of tinea. He thinks Mons. A.'s remarks ought to have been almost exclusively applied to the porrigo favosa. At the same time, he admits that, in bad cases, the constitution sympathizes, and a

feverish state of the system is rarely absent. Here constitutional treatment is necessary of course.

3. *Porrigo Favosa.* Willan has accurately described this disease. The very large quantities of secretion poured out from the diseased surface and forming the scabs, distinguish it from all others. The achores or minute pustules of the P. Scutulata and the favi of the present subject, have hitherto been considered as varieties of the same genus, differing chiefly in magnitude; but the propriety of this our author questions. The achores, he observes, are deeply seated in the cutis, and obviously occasioned by the irritation of the hair. The favi, on the other hand, occur on every part of the body, and are, in most cases, formed by the mere effusion of fluid under the cuticle from the vessels on the surface of the cutis, the distended cuticle forming the parietes of the pustule, and being the only means of retaining its contents in its place, ulceration of the cutis not occurring. The matter of one is deeply imbedded in the structure of the cutis—while that of the other lies on its surface.

"They are erroneously supposed to be the produce of the same infection, but the application of the matter of each only excites its own disease. In one the hair falls off; in the other it is very little affected, nor is its removal, except by shaving, necessary to the cure." 80.

Porrigo scutulata is considered by our author and others, as a merely local disease, not connected with any particular

must be acted on, and it requires more frequently depletion and alteratives than tonics, which have been recommended. Applications which allay irritation and relieve pain, are useful auxiliaries. When, however, the disease is situated on the scalp, some modification of treatment is necessary. Here there is constant irritation from the hair, while the glutinous secretion lodging prevents any application to the diseased surface. In protracted cases, where the disease is aggravated by myriads of vermin and accumulated secretions, the removal of filth, even at the risk of some pain, must be attempted. The scabs must be soaked in warm water and soap, and the hair removed by the razor, as preliminary steps. Whether ulceration exist or not, fomentations and poultices are necessary to subdue the inflammatory state of the parts; after which, attention to the general health is sometimes all that is necessary.

When the disease has existed long, however, it will require more active external remedies. An effectual application, Mr. Plumbe observes, will be found in a solution of caustic or sulphate of copper (argent. nit. ℈j. aq. distillat. ℥j. or cupri sulph. ʒj. aq. ferv. ℥ss.) in such cases. These fluids are to be applied, by means of a camel's hair brush, to the abraded surface twice or thrice a day until the discharge ceases.

The *p. favosa*, like ringworm, spreads rapidly by infection. When a favous pustule is thus produced by inoculation, it may often be checked speedily in its course. Its contents may be removed at once, and if the abrasion is of sufficient consequence to require a poultice, it may be applied. If this cannot be done, frequent ablution with warm water will diminish the irritation, remove the secretion, and prevent extension of the disease.

4. *Porrigo Furfurans et Lupinosa.* Our limits will not permit us to analyze Mr. Plumbe's fifth and sixth chapters on *P. Furfurans*, and *P. Lupinosa*. The *former* of these being, like p. favosa, generally owing to constitutional disease, requires the same treatment, local and general, as the p. favosa, and sometimes as the p. scutulata. The *porrigo lupinosa*, Mr. Plumbe considers to differ so little from common ringworm of the scalp, as to render it doubtful whether it ought to receive a distinctive appellation.

Mr. Plumbe concludes his work by pressing on the attention of practitioners the paramount necessity of cleanliness in all species of porrigo.

We have, we hope, exhibited sufficient specimens of the matter of this work, to induce our readers to seek a more

intimate acquaintance with the contents of the original. The style is plain, and generally perspicuous, with the exception of a considerable defect in punctuation—the semicolon being far too often used, where a comma only was necessary. This, however, is a *point* of no great consequence in a practical work on a subject which certainly neither requires, nor admits of, much literary embellishment.

It now becomes our duty to notice the opinions and practices of an illustrious foreigner, M. Alibert, whose opportunities for observing cutaneous diseases, at the HÔPITAL ST. LOUIS, are certainly (and we pay no great compliment to the propreté of our continental neighbours by saying so) unequalled in any capital of Europe—and particularly in this capital, where more than a million of inhabitants can hardly furnish subjects for a small dispensary, erected lately for the relief of diseases of the skin.

1. *General Phenomena of Tinea.* The individuals affected with tinea, generally feel, at first, a pruritus, more or less violent, on the head. The scalp, on certain points of its surface, next becomes red, chaps, or even becomes a little tumefied. A swelling of the cervical glands sometimes accompanies the complaint—more rarely a headach. The itching daily increases; and pustules or vesicles are seen surrounded by an inflamed areola. In some cases no trace of ulceration can be perceived, a reddish viscid humour appearing to exude from the dilated mouths of the glandular

[redacted]

Our author observes, that, with the exception of crusta lactea, the different species of tinea rarely attack infants while suckling. The great majority of instances commence after two years of age, and the complaint commits the greatest ravages during the first septenary period. It rarely continues after that. Some species of tinea, however, (the *teigne faveuse*, which appears to be the *porrigo lupinosa* of Willan and Bateman) are more prone to occur after the period of infancy, several examples of which are adduced. It is not with tinea as with some other eruptions. Nature throws it out for purposes not well known to us at present; and she cures it at or before puberty, even without any assistance from medicine.* Of all the species of tinea, the *teigne faveuse* (porrigo lupinosa) is the most frequent in the Hôpital Saint Louis. Tinea mucosa (crusta lactea) abounds in the provincial towns; but as it happens during lactation, mothers rarely send their children to an hospital at such a period.

2. *Etiology.* It is useless, as M. Alibert justly observes, to notice the absurd notions of the ancients respecting the causes of tinea—some placing it to the account of bile, others to an alkali, an acid, an acrid humour, &c. &c.† We must attribute the phenomena of tinea to certain laws of the animal economy implanted there by our Creator. We see one species (crusta lactea) disappear when lactation is over—we see other species for the most part disappear spontaneously when puberty declares itself. Can we hesitate, then, to consider these exanthemata as connected with the laws and operations of the constitution.

Here our author relates a curious case of chronic enteritis, where the child was daily wasting with fever and abdominal irritation. The physician, M. l'Homme, inoculated the forehead of the patient with matter from tinea mucosa (crusta lactea) and soon produced the disease. In ten days the whole face was in a mask of humid scabs, and from that period the abdominal pain and sensibility began to decline.

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* This is a fact which militates most decidedly against tinea being a perfectly local disease.

† M. Alibert makes a keen remark at the beginning of his paper, which is worth recording. "When I see," says he, "the disease every day before me, why should I run to the Greeks and Arabs for a description of it?" If Willan and Bateman had taken this hint, what a huge mass of useless learning would have been spared? "Tout étalage d'erudition ne serait qu'un vain jeu de l'esprit, sans avantage pour la science." Alibert, *in loco citato*.

The child was soon restored to health. M. Alibert speaks of great advantages resulting from this species of inoculation, under his own observation. The following doctrine may not be believed in this country; yet we are inclined to think that it is not devoid of some foundation in truth.

"All the different species of tinea, however intractable their character, tend to some useful purpose in the animal economy, by determining towards the skin certain noxious principles superabounding in the system. Hence we may account for those fatal accidents that have followed a repulsion of these eruptions, as suppuration of the encephalon, hydrocephalus, enlargement of the mesenteric glands, &c. as witnessed by Forestus, Bonetus, Hoffman, and others."

Nature, however, sometimes opens other outlets, when these morbific humours are suppressed. M. Alibert has seen obstinate diarrhœa succeed the suppression of crusta lactea. A young woman at the St. Louis was affected with tinea furfuracea, to which an ointment was applied, composed of sulphur and hog's lard. As soon as the itching and irritation of the scalp were allayed, a violent pruritus was felt in the pudendum, succeeded by an eruption there. The ointment being laid aside, the irritation of the scalp returned, and the pudendal eruption and pruritus vanished. It was also observed, that in proportion as the tinea was mitigated by the sulphur, a thick and copious sediment appeared in this young woman's urine.

The records of Saint Louis, and M. Alibert's private experience authorize him to assert that a predisposition to tinea is hereditary.

Of M. Alilert's *post mortem and chymical* investigations, it is not our intention to take any notice, as they do not appear to lead to practical or satisfactory results.

4. *Therapeutics.* M. Alibert justly observes, that the greater the number of remedies we have for a disease, the less power we have over it. Ambrose Paré recommended surgeons not to attempt the removal of tinea—probably from being convinced that it was one of those diseases which it is "dangerous to cure." M. Alibert, without subscribing entirely to Paré's advice, is nevertheless satisfied that a too sudden removal of tinea is not without serious inconvenience, not to say danger, to many of the individuals affected with it. Thus, he has lately attended a young girl, 14 years of age, who was seized with a most severe stomach complaint, and uterine discharge, on having this eruption too precipitately removed. A woman was lately sent to the Saint Louis, who lost her sight almost immediately after a strong repellent application to tinea favosa. He has seen white swellings, tabes mesenterica, phthisis, fatal diarrhœa, and various other dangerous diseases quickly developed, after an injudicious and premature cure of tinea.

At the same time, our author properly observes that the irritation which tinea produces, together with the injury which it may occasion to the skin and subjacent parts, if long continued, renders it improper for us to leave the removal of the disease entirely to the efforts of Nature, though she is generally victorious in the end.

The intimate sympathy which exists between the skin and the interior organs, and the glandular or lymphatic disorders which so frequently show themselves during tinea, demonstrate, our author observes, that the treatment of this disease should not be confined to mere local means. We see, in this complaint, an afflux, or, as it has been termed, a "determination," to the head and its integuments:—should we then dream of checking the cutaneous manifestation, without previously, or contemporaneously changing the balance, or rather derangement of balance in the circulation, which occasioned it? Is it not proper to encourage other evacuations which may counterbalance the effects of checking the discharge from tinea? Facts seen every day at Saint Louis illustrate these questions. It is there constantly remarked that those children who are subject to nasal hæmorrhages, or to a large discharge of fetid urine, are very little subject to tinea; or, if affected thereby, that they are very easily cured. Hippocrates, indeed, and his

disciples, inculcated constitutional treatment in tinea, and endeavoured to operate a derivation by purgatives and diuretics. He also advised a strict regimen. These are all found serviceable by practitioners of the present day, and greatly assist the local means of cure.

As to topical applications, these have been multiplied almost *ad infinitum*. Every one knows the celebrated plaster in use ever since the days of Ambrose Paré, and into the composition of which hellebore, orpiment, litharge, vitriol, alum, quick-lime, mercury, and a great number of vegetable acrids or narcotics entered! The modern pitch-cap for deracinating the hair, still employed in most of the hospitals and by regular practitioners, is little less barbarous, M. Alibert thinks, than the monstrous composition above mentioned. Yet this plan has been pursued in Saint Louis (where the greatest number of tinea that can be seen in any part of Europe are collected) for very many years, the results of which are impartially stated by M. Alibert in the following words.

"1mo. The space of six months was the shortest period of cure, on this plan; and the number cured thus was the smallest of any. 2do. A considerable number required eleven *or* twelve months of this process. 3tio. In the course of two years a great number were cured. 4to. Three years were generally required for curing those in whom the disease was obstinate. 5to. A few resisted the process even after the last-mentioned period. 6to. The cure was not always permanent, there being several relapses requiring new process. 7mo. Some children experienced severe diseases after the cure by the cap, and remained languishing and cachectic." 437.

M. Alibert condemns also the process of extirpating the hairs, one by one, with pincers, as "less effectual, and still more barbarous than the preceding." "Cette méthode n'est-elle pas plus defectueuse, pour ne pas dire plus barbare, que la precedente, par les violences repetées qu'elle fait exercer sur le cuir chevalu."

M. Alibert here enumerates and descants on the various topical remedies which have been recommended in tinea, all of which were tried in the most careful manner at the Saint Louis, but with little or no success—many of them producing manifest injury. From this denunciation, however, he excepts a remedy lately much praised in Germany, and used by himself and colleagues at Saint Louis, with considerable and unexpected benefit. This is a combination of equal parts of sulphur and charcoal incorporated with common cerate, and well rubbed on the scalp, after the hair

has been shaven, and the scabs softened and removed by cataplasms and fomentations.

"Those who have visited St. Louis," says our author, "can witness, that very frequently this application has been crowned with unequivocal success. "Les temoins assez nombreux savent que fort souvent nous avons vu cette nouvelle application coronnée d'un succés incontestible."

In short, he has seen more certain and speedy cures from this than from any of the applications before enumerated. Out of thirty individuals, thirteen were cured in about four months by the daily use of this application—the rest required seven or eight months. M. Alibert thinks that this application is perfectly safe, as no inconvenience in any case has resulted from its employment. He has lately succeeded in curing a most obstinate case of tinea favosa by this process, which had resisted every other means from infancy to the age of eleven years. He thinks the proportion of sulphur ought, in general, to be greater than that of the charcoal.

In order, however, to guard the constitution against the consequences of suppressing the discharge from tinea, and removing an irritation of long standing from a cutaneous surface, M. Alibert thinks that the prudent and enlightened physician will establish some other drain, as by an issue or seton—or at least take blood occasionally from the system as an equivalent.

In aid of the local means of cure, also, internal and general means should be employed. The alimentary canal should be particularly attended to; and the warm bath, especially in those cases where other parts of the surface besides the scalp, are affected, becomes a powerful auxiliary.

Our author observes that there are many cases of tinea, especially where the disease has not committed great ravages on the integuments, which give way to cleanliness alone; but that there are many others, where there is vice of constitution, and where the disease will not be subdued till this is corrected. The following observation of this experienced physician may be worthy the attention of some of our precipitate practitioners, who ridicule the connexion of local, and particularly cutaneous affections, with constitutional disorder.

May I be permitted one final reflection which may account for the diversity of results which men experience in the treatment of the complaint in question. Cutaneous diseases, and of course tinea, have, like other diseases, their periods of access, increase, and de-

cline. Practitioners are astonished that they do not succeed—while it is no uncommon thing to see them administering, from the beginning, those remedies which can only be useful when the disease is on the decline. They are too impatient to follow the footsteps or indications of Nature, when she appears slow in her march, and life is short in its duration."

M. Alibert has made numerous comparative trials with all the different means, active and simple; and he found none so good and so safe as the sulphureous application above mentioned, combined with warm bathing, cleanliness, and attention to the general health. This treatment, he affirms, is applicable to all the different species of tinea. Where the disease is very inveterate or of long standing, and where the vital properties of the integuments must be changed, he recommends, as a depilatory, an ointment, the basis of which is potassa and carbonate of lime. In the course of a few days, this application causes those hairs which grow on the diseased part to fall off, after which the scalp whitens, the itching subsides, and the cure proceeds, when aided by proper internal means.

Upon the whole, while we consider M. Alibert, and our continental brethren, as too much afraid of curing or repelling cutaneous eruptions, we are convinced that the practitioners of this country are rather too prone to run into a contrary extreme, and attack affections of the surface with as little ceremony as if the skin was a kind of covering quite unconnected with the rest of the constitution. We have seen so many injurious consequences result from the sudden suppression of long established discharges, and the precipitate removal of local irritations, that we cannot too earnestly exhort our junior brethren to keep their attention turned to this subject. We would recommend to their consideration the many important remarks which Dr. Parry has made on this subject in his elements of pathology, a work too little studied in the present day. It is our intention, ere long, to present to our readers a very comprehensive view of that experienced physician's work, which may perchance convince them that they are allowing a mine of great value to remain unworked, though close to the surface.

VI.

A Manual for the Student of Anatomy: containing Rules for displaying the Structure of the Body, so as to exhibit the Elementary Views of Anatomy, and their Application to Pathology and Surgery. By JOHN SHAW; being an Outline of the Demonstrations delivered by him to the Students in the School of Great Windmill Street. One closely printed volume, 8vo. pp. 342, 2 plates. London, 1821.

WORKS of this description do not usually afford materials for analysis, or even criticism. The origin of a muscle, the distribution of an artery, or the processes of a bone, are interesting subjects to the student, who has yet to pass those awful barriers and unknown trials, in Lincoln's-Inn-Fields or Creed Lane; but they have lost their attractions for the veteran Esculapius, whose objects of pursuit are of a different character. The author of the work before us has deviated from the common road, and endeavoured to render his manual more interesting than manuals generally are, by the frequent introduction of physiological, pathological, and therapeutical observations. The utility of this plan, we know, has been called in question—and here, as elsewhere, "much may be said on both sides." For our own parts, we have always been in favour of this mixture of the "utile et dulce," in spite of all the denunciations against it by those stiff-rumped and sour-crout philosophers, whose discourses are as dry as their skeletons—the one being as barren as the other is bare.

We will not assert that the present form and arrangement of Mr. Shaw's book are the very best that could possibly be devised for the London dissector—especially for the student who has but one short year to swallow (for digestion is out of the question) the whole circle of medical and chirurgical science. But we think it a very useful and agreeable pocket companion for the youth who goes leisurely and fundamentally to work, in acquiring a thorough knowledge of anatomy and surgery. We conceive also that it will prove a very acceptable treat to the provincial practitioner, as a guide in his *post mortem* researches, considerably more adapted to his taste and habits than any thing of the kind that we have yet seen.

One of Mr. Shaw's main objects, in this publication, appears to be the direction of the student's attention *particularly* to those points of anatomy which are most useful.

and the recollection of which will be of most importance, when afterward engaged in the practice of his profession. "In this attempt," says Mr. Shaw, "the student will discover many observations of Mr. Charles Bell;" for which, by the by, Mr. S. had no great reason to make apology, since the discovery will not be very disagreeable to those who are acquainted (and who are not?) with Mr. Bell's abilities.

Mr. Shaw wisely cautions, though somewhat in jest, the young student, whose time is limited, "not to harass himself in acquiring such a knowledge of anatomy, as consists in a particular description of the seven and twenty processes of the sphenoid bone, or the exact origins and insertions of the multifidus spinæ," though he disparages not the knowledge of minute anatomy—on the contrary, he contends that no man can be a thorough good surgeon without that knowledge. There is, of course, a wide difference between that minute anatomy which is useful, and that which is devoid of any possible utility.

Some students in anatomy are advised not to read, and this upon the authority of John Hunter. We believe it is the same with the non-reading student, as with the non-reading practitioner, "he blunders through life by rote; or, if he possess native talent, he is often making *fancied* discoveries, which a little reading would have shown him to be the discoveries of his predecessors."

Mr. Shaw throws out some useful hints to students in his introduction. He is right, we think, in attributing the bad effects of cuts during dissection to bad habit of the

he much expect. Mr. Shaw has a spice of the critic in his own composition, and consequently he should take in good part the criticisms of others.

Our notices of the work before us must, therefore, be confined to those points of physiology, pathology, and practice, which may prove interesting to the general mass of our readers; and we are not without the hope of being able to offer them food for reflection, as well as matter for practical application, in the course of this analysis.

1. *Hernia.* Mr. Shaw gives many judicious instructions to the young pupil relative to the dissection of the parts concerned in hernia; and to the practitioner, the following extract may not prove uninteresting.

"The most common seat of stricture in inguinal hernia is the external ring; for though we do not see the ring until we have dissected the parts, still we can feel it, even before the skin is removed, by pushing the finger up along the cord. If the sac has been opened, if the external ring has been cut, and the stricture still continues, what is the cause of stricture? It cannot be produced by the margins of the internal oblique or transversalis muscles, for they will relax. Since we are told by high authority, that the stricture, in such a case, is caused by the internal ring, we cannot deny that it may occasionally happen; but we should be more inclined to say, that the stricture is not caused by the internal ring itself, but by the neck of the sac, which is situated in that part. Our reasons for supposing so, are the following: In the dissection of the parts, in their natural or ruptured state, there is no internal ring, until it is made by pushing up the cellular membrane which surrounds the cord; and even then, if we try its strength, we find it very weak, and particularly on the inner part; while the neck of the sac is generally so strong, that we might as easily break a circle of whip cord as tear it. The external ring, and the neck of the sac, may be considered as the most common seats of stricture: but there are varieties, into the consideration of which it would be impossible to enter at present." P. 16.

2. *Morbid Anatomy of the Viscera.* A person not much in the habit of opening bodies, is very liable to make mistakes respecting the effects of diseases left after death.

"It is a very common mistake to describe the loaded state of the vessels as an appearance denoting previous inflammation; the state of the true inflamed intestine is so distinct, that it can hardly be forgotten after it has been once seen. In the first stage, there are numerous small vessels seen upon the gut, like those on the eye in ophthalmia, with a suffusion around them; in the second stage, there is matter, or lymph, effused; and in the more advanced state, adhe-

sions are formed between the surfaces of the intestines. But there are many different kinds of peritonitis. In that which is called idiopathic, the peritoneum will be found coated with lymph; but after inflammation, in consequence of strangulated hernia, the substance of the intestine will appear more affected than the proper peritoneum." P. 50.

"From the variety of appearances of inflammation,—from the black spots,—and from the ulceration and corrosion, which, in the course of my dissections, I have seen in the stomachs of those who have died without any marked symptoms of affection of that viscus, —and from the close resemblance which many of these have had to the stomachs of those persons who have swallowed poison,—and from the similarity of the appearances produced by gastritis, and other diseases, to those caused by poison,—I have come to the conviction, that the appearance of the stomach or intestines alone, in a question of poison, is not to be depended on. In the last book which has been written on poisons, (that of Orfila,) the list of appearances which is given, as to be expected, where poison has been taken, corresponds exactly with those which I have found in stomachs where I was certain no deleterious matter had been taken. I am happy to think, that this degree of uncertainty will prevent the anatomist from being called on to decide a question which may involve the life of a fellow-creature." 51.

Mr. Shaw properly observes that, in the bodies of children who have died with much intestinal irritation, it is not unusual to find intus-susceptions; but these are seldom the cause of death; whereas, in adults there is generally an accompanying inflammation, producing strangulation, as in those who have died with symptoms of hernia, but with no external tumour. Here we generally find a portion of in-

scirrhous, but I suspect that, like the other salivary glands, it is very seldom diseased."

3. *Muscular Fibres in the Urethra.* Mr. Shaw jocosely enough smiles at the discovery of Sir Everard Home, who, by the aid of very powerful microscopes, has recognised MUSCLES in the urethra, whose *tendons* are of the consistence of *mucus*. Mr. Shaw can hardly believe that the spasmodic action of *such* muscles will account for the occasional difficulty of introducing the bougie.

We beg the attention of *all* our young, and a few of our elder brethren, to the following passage—of the truth of which we are convinced, from personal observation.

"It will now be evident that there are several causes of difficulty to the introduction of an instrument through this part of the urethra —1st. The natural curve of the canal—2d. the sinus of the bulb—3. The edge of the triangular ligament: but the principal difficulty is caused by the circular ligament which surrounds the narrow part of the canal.

"It requires so much management, and such a knowledge of the structure of this part, to pass an instrument nicely through it, that I can now, with confidence, assert, that nine cases out of ten of the strictures that are said to exist here, are a consequence of this natural narrowing of the canal having been mistaken for stricture. I am now, by experience, so satisfied of this, that when a patient comes to me complaining of stricture *only at this part*,—if he has been examined by another surgeon, a short time before, I beg him to let the urethra have some days rest before I sound him; for this part of the canal is so irritable, that if there has been the slightest injury done to the membrane, there will be a spasmodic affection produced the moment the bougie touches it, so as to lead the patient to believe that the difficulty of introducing the instrument is in consequence of a stricture. But there is another source of error here,—for the end of the bougie may be indented by being pressed against the edge of the ligament, so as to give exactly that appearance which has been considered as an unequivocal proof of the existence of stricture." 64.

Mr. Shaw observes, a few pages farther on, that although stricture may form at any part of the urethra anterior to the circular ligament, yet it occurs generally at two points.—at an inch and a half from the glans penis, and at six or seven inches down, *i. e.* near the bulb. There are two circumstances not much noticed, Mr. Shaw thinks, which should be borne in mind by the student.

"1st, That there is not one example in a hundred of stricture occurring farther back, than immediately behind the ligament of the bulb.

"2d, That the ducts of the prostate, which are naturally very small, are always more or less enlarged in cases of severe stricture.

"It must be evident that certain practical rules are to be deduced from these facts. 1st, If an instrument is obstructed posterior to the ligament of the bulb, that we may suspect that the cause of the obstruction is not such as will be overcome by the same means as a stricture would; and 2d, We can now understand why, in a severe case of stricture, we ought to be content with so dilating the stricture, as to enable the patient to pass his urine freely,—and that we should not be too anxious to pass an instrument into the bladder, for, in the attempt, the point may enter into one of the enlarged ducts of the prostate, and consequently produce great irritation, and even lead us to suspect that there is still another stricture: if, with this idea, we persevere in pushing the instrument on, we shall certainly do irreparable mischief to the patient." 72.

4. *Iliac Artery.* In the dissection of the thigh, Mr. Shaw introduces a long extract from Mr. Charles Bell's "Illustrations of the great operations," lately published, relative to tying the external iliac. As this is an operation now pretty often performed, and as the expense of Mr. Bell's work somewhat limits the range of its circulation, especially through the army, navy, and colonies, where this Journal travels extensively, we shall furnish our readers with several of the rules and directions laid down by the above-mentioned able surgeon. Mr. Bell preliminarily remarks that the object of this operation is to tie the artery so high, that the wound shall not interfere with the tumour of the aneurism, nor open the coagulated blood to the influence of the air, nor excite inflammation in the sac by its contiguity. At the same time, there must be no breach of the investing membrane of the abdomen, else the patient's danger will be increased a hundred fold.

"*Incision.* Having ascertained the middle point betwixt the superior spinous process of the os ilii and the symphisis pubis, you feel there the pulsation of the artery. Next feel the spermatic cord, and trace it backward into the abdominal ring; and mark where it disappears. You have now got two points to direct your incision; make another, by drawing a line from the superior spinous process of the os ilii to the umbilicus; mark a point upon this line, two fingers' breadth from the process. Begin the incision opposite the outer margin of the abdominal ring; carry it over the point where you felt the artery beating, in a direction outward and upward, and let it terminate at the point you have marked at two finger's breadth from the spinous process of the os ilii, measured in a direction toward the umbilicus.

"'*Second Incision.* Having exposed the aponeurosis, or tendon of the external oblique muscle, and observed the direction of its fibres, pass the directory into the ring, and into the spermatic passage; taking care that the instrument is directly close under the

tendon, and, consequently, external to the cord: slit up the tendon in the direction of its fibres.

"'*The Cord.* The spermatic cord is now exposed. With the blunt hook, and the handle of the knife, the cord is to be raised and pressed upward and inward. In doing this, you will necessarily raise the lower edge of the obliquus internus muscle. If the patient be fat, or the aneurism prominent and high, the wound, in this state, will be too confined; and it will be necessary first to pass the directory, and then the point of the finger, under the edge of the muscles, and to divide them in a direction upward. The condensed cellular membrane, or fascia, which is on the lower surface of the transversalis, will generally yield to the finger.

"'There will be found a soft mass, just within the Poupart ligament; it may be mistaken for a vessel; the more especially, as the pulsation may be felt on pressing it. It is a lymphatic gland. This gland is to be left in its place. Above this, there is a soft, fatty substance, which is to be put aside with the finger and the handle of the knife; and now, upon putting in the finger, the artery will be distinctly felt.

"'The space, where you feel the artery, is thus defined, 1. Below, toward the thigh, there is the Poupart ligament, and the internal inguinal gland. 2. On the inside, toward the pubes, you have the epigastric artery. 3. Above, and toward the ilium, there is the edge of the oblique and transversalis muscle. 4. And above, and toward the rectus, you have the spermatic cord.

"'You should now push up the spermatic cord and cellular membrane,* and you place an assistant's finger there, to guard the peritoneum; you have the epigastric artery on the inside, still involved in its cellular membrane: you may now expose the artery.

"'Feeling the artery full, and pulsating under your finger, you think it bare; when a little consideration should remind you that it is not.† It is still covered with the sheath, and filaments of the fascia strengthen that sheath: and here I must again observe, that

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* "To me it appears that there are good reasons for pushing up the spermatic cord. First, you get much easier at the artery. Secondly, you have the spermatic cord betwixt you and the peritoneum. Thirdly, if you incline, you may, in this direction, push the peritoneum very high, and expose the external iliac artery at its highest point; whereas, if you go above the spermatic cord, and keep it in its place, you must be entangled in the reflection of the vas deferens, and you will make the peritoneum thin as a cobweb, by separating the cellular tissue of the cord from it.

† Mr. Abernethy says, "the pulsation of the artery made it clearly distinguishable from the contiguous parts, but I could not get my finger round it with the facility which I expected." "After ineffectual trials to pass my finger beneath the artery, I was obliged to make a slight incision on either side of it, in the same manner as is necessary when it is taken up in the thigh, where the fascia which binds it down in its situation is strong." This double incision is not necessary in either of these cases; and, I apprehend, very dangerous in the present instance.

the safest way is, to scratch the sheath, directly over the centre of the artery; to cut at the side of the artery is dangerous. The vein lies close by the inside of the artery, and, in some measure, below it. The vein is on the inside, the anterior crural nerve on the outside.* Therefore, I advise you to scratch, until you can pass your probe, or blunt hook, through the sheath and ligamentous fibres which directly cover the artery.

"'When you have exposed the proper coat of the artery, make the assistant raise the thigh as much as the circumstances of the tumour will admit; then you will be able to grasp the artery betwixt the thumb and the fore-finger; you will find it so loose, that you will experience no difficulty in passing the needle under it. It is struggling to thrust the blunt needle through the sheath and fibres of the fascia, and neglecting to raise the limb, that makes this part of the operation tedious.

"'One firm ligature of four threads, waxed and oiled, will be sufficient; it is not necessary to tie the artery twice, nor, consequently, to cut it across."† 130.

Mr. Charles Bell long ago observed, that this operation might be expected to be successful, when performed for spontaneous aneurism; but not so for aneurism consequent on a wound of the vessel, because, in the latter case, the artery must be tied both above and below the wound. The surgical world are aware that Dr. Stevens took up the internal or posterior iliac artery with success, for an aneurism of the gluteal artery, in the case of a negro woman in the West Indies. We do not think that such an operation will ever succeed on the European. We cannot resist the temptation of quoting Mr. Shaw's directions for taking up the femoral artery in the thigh, as performed for popliteal

the second, the thin superficial fascia, which should be cut to the full extent of the incision through the skin. As the cut is made in a line across the sartorius, there will be little difficulty in recognising this muscle. (And here I may remark, that none except those that have witnessed the exhibition, can imagine the difficulties which have ensued, in consequence of the edge of the triceps having been mistaken for the sartorious.) The lower edge of the sartorius is now to be raised,—this will expose the fascia which passes from the triceps to the vastus internus; a little perforation is then to be made into the fascia, and a directory is to be passed under it, so that it may be slit up. The sheath which surrounds the artery, vein, and nerve, will now be seen, and when this is opened, it will be easy to pass a blunt needle under the vessels." 133.

The saphena nerve is far enough removed to be in no danger, unless there is great negligence. If tied, it will be a reproach to the Surgeon as long as he lives; for the pain will be so distinctly in the line of the nerve as to leave no doubt on the patient's mind as to whom he is indebted for this legacy.

5. *Brain.* Mr. Shaw's chapter on the dissection of the brain will be found very interesting to more than the student—particularly his remarks on the pathological appearances in that important organ. We can glance at but a few of them.

He observes that the appearances said to denote phlogosis of the brain are very questionable, as some of them may be easily washed off. After phrenitis, indeed, and violent external injuries, the inflammation will be unequivocal, as the vessels on the surface of the dura mater will be as much blood-shot as the vessels of the conjunctiva in ophthalmia, with layers of lymph occasionally on the inner surface. The other membranes will also be inflamed. Depositions of bone are not uncommonly found in the dura mater, especially in the falx. In three cases, where these were found in contact with the olfactory nerves, the patients had been, for a considerable time previous to death, rendered uncomfortable by the sensation of unpleasant odours. The appearances in apoplexy need not be described here. But Mr. Shaw remarks on the importance of observing how the blood is diffused over the brain, in injuries, "as it will show the inutility of puncturing the dura mater after the trepan, with the intention of evacuating blood which may be under it."

The tunica arachnoides will be found thickened in all cases where inflammation of the brain has existed for some time, and there will also generally be effusion of serum under the membrane.

"It is, perhaps, improper to attach much importance to this effusion, because it is found in almost every case of protracted disease,—as in fever, or in cases where a patient has died in consequence of irritation of any viscus, and particularly after any operation on the bladder, or from retention of urine. When we find this effusion, we may predict that there will be water in the ventricles." 159.

The gorged state of the vessels of the pia mater is often owing to the position of the head after death; "but in the true inflammation, the vessels of the pia mater will be very numerous, and the membrane will be found thickened."

The substance of the brain, in the infant, is very soft, and gradually becomes firmer, until extreme old age, when it becomes soft again.

"It is very difficult to determine whether the great fulness of the vessels is to be taken as denoting that there has been any particular action in them during the life of the patient; because there is frequently an unnatural degree of fulness to be found in the vessels of the brain of persons in whom there were no symptoms of deranged functions during life.—I am, therefore, inclined to consider the fulness of the vessels, in the greater number of cases, to be in a great measure dependent on the position of the head after death, and particularly in those cases of fever, where, in consequence of the blood not coagulating, it flows freely up by the deep veins, in which the valves are generally so imperfect, as to permit the blood to pass. We may often see a proof of this, in the quantity of blood which escapes after the brain is removed, if the head be left in a depending position." 160.

of clear limpid fluid escaped in a stream. This he has noticed in a proportionate degree in other animals.

Mr. Shaw suspects that the inflammatory appearances described in the spinal brains of tetanic patients have been produced by the gravitation of the blood after death. Mr. S. examined a man lately who sunk under tetanus. He got him placed on his face immediately after death, and on opening the spine there was no appearance of that loaded state of the vessels on the posterior column, which has been considered as a proof of the previous existence of inflammation of the spinal marrow. But the anterior portion, which in this case had been the most depending part while the blood was gravitating, was covered with a congeries of distended vessels. Mr. Shaw, however, does not deny the occasional inflammation of the spinal marrow, or the existence of tumours in it, for he has often seen the latter.

Mr. Shaw throws out several interesting hints, of a forensic nature, relative to examinations of the head in cases of sudden death. He properly observes, that it is sometimes exceedingly difficult to ascertain whether many of the appearances, within the cranium, be attributable to injury, previous disease, or *post mortem* changes. Even the question whether or not there has been a fracture of the skull, before death, is not always so easy to be decided as one would imagine.

"If the fracture has occurred immediately before the patient's death, there will be coagulated blood found upon the bone, and in the fissures; but if the patient has survived for some time, there will be marks of inflammation, and perhaps pus in contact with the skull. If a fracture has been produced in making the examination, (which sometimes happens even in a very careful dissector's hands,) the blood in the fracture will not be coagulated, nor will there be any effusion around the portions. If there have been symptoms of fracture after a blow on the upper part, and if we cannot discover one opposite to the part struck, we should look to the temples, or to the base of the skull." 164.

We are tempted to quote the following forensic case, in which Mr. Charles Bell was concerned, as affording materials for reflection to the medico-legal and pathological inquirer.

"An industrious man returning home from his work, found his house empty of every thing,—the bed he was to lie upon, and the tools of his trade, sold for gin by his wife, whom he found in a gin-shop, where she had been drinking and dancing. He brought her home, and, in the passage of his house, struck her, and ordered her to go up stairs. She refused to go; he carried her upon his shoul-

ders, and the contention continuing up stairs, he struck her again. There having been no one present, we have only the husband's account of her death. He said, that whilst sitting on her chair, she fell down, upon which he threw her on the bed, conceiving that she was in a fit, such as he had seen her in formerly. Some of her neighbours coming in, found her dead. Mr. C. Bell was requested to examine the body of this woman. The man was afterward tried at the Old Bailey, for murder, and Mr. Bell's deposition was nearly to this effect. In the abdomen and thorax, nothing appeared remarkable, further than that the stomach contained a quantity of gin; and that there was a blush of redness on the lower orifice of the stomach and duodenum. On the head, there were several bruises; but the bone was not at all hurt, and no extravasation appeared under the bone. On exposing the membranes of the brain, the vessels of the pia mater were empty of blood, as if from pressure. There was a serous effusion under the tunica arachnoidea, and in the cavities of the brain, similar to what has been found in those who have died from intoxication. On the surface of the brain, there were what appeared to be spots of extravasated blood; but upon tracing them toward the base, they proved to be streams of blood which had flowed from a vessel ruptured in the base of the brain. The base of the brain was covered with coagulated blood, in which also, all the roots of the nerves were involved. On dissecting the cavities of the brain, the blood was found to have penetrated into the third ventricle, by perforating its floor. Upon taking out the brain, and tracing the vessels in the base, the anterior artery of the cerebrum going off from the internal carotid of the left side, was found torn half way across: from this source came the extravasated blood.

"The cause of this woman's death, was the bursting of the blood from the ruptured vessel, and the pressure on the brain, or, more correctly speaking, on the vessels of the brain. As to the cause of the rupture, Mr. Bell's opinion coincided with the best authorities in pathology, that there is a state of the vessels, in which an external injury or shock is more apt to produce rupture,—and drunkenness may be supposed to be the artificial state of excitement, which most resembles this state of the vessels. Being asked whether the blows were the cause of the rupture? he said he conceived it very likely that a shock would rupture the vessel: and being then asked, whether he conceived that this woman was more likely to have a vessel ruptured, from having been intoxicated? he was of opinion, that intoxication, and the struggle, were likely to produce such a degree of activity of the circulation in the head, that a less violent blow might produce rupture, than what, in other circumstances, would have proved fatal."

"The man was acquitted." 165.

6. *Pathological Examination of the Chest.* The pleura, of course, is the first part that presents for examination. Serous effusion, between the pleura, Mr. Shaw truly remarks, is a very common appearance in the greater number

of cases where there has been protracted visceral disease, and in children who have died of measles. Deaths, from cancer, have been sufficiently numerous, in Middlesex Hospital, to prove that serous effusion in the chest is the most common immediate cause of the fatal termination in that terrible disease. It is also not very uncommon after severe accidents or great surgical operations. If a patient die of acute thoracic inflammation, we shall find a quantity of coagulable lymph or inflammatory crust on the inner surface of the chest, of the consistence of jelly. These exudations approach, in advanced stages, to the form of natural membranes, but thickened and opaque. Adhesions between the pleura costalis and pulmonalis can hardly be called a disease, but the sequela of inflammation, and of very little consequence. In examining the lungs, the effects of sanguineous *gravitation* should not be mistaken for sanguineous *congestion*, as is sometimes done. In the *former* case there will be found no crowd of fine vessels filled with blood, or any other mark of inflammation of the pleura. The blood accumulated from gravitation is of a dark colour—in inflammation, the part will appear florid.

"The lung which is loaded with blood, from gravitation, may be distinguished from that which is condensed by inflammation, by cutting into it; for then, the blood may be squeezed out, and the lung will regain its natural appearance;—but a diseased portion will feel denser and heavier, and when squeezed, the blood will not escape, nor will there be any of that crackling feel, which is felt in the healthy structure; and the interior of the substance, when it is cut into, will have much resemblance to the liver,—whence it has been called, by the French pathologists, *pulmo hepatize*." 199.

The appearances in the lungs, where the patient has died of phthisis, are unhappily too familiar to us all. After describing tubercles, induration, vomicæ, and abscesses, Mr. Shaw observes, that "the state of the large vessels, in these great abscesses, is very extraordinary; for they will sometimes be found with open mouths, projecting into the sac—more commonly, however, with their mouths plugged up with coagula, like the arteries of a stump after amputation."

"Tumours will sometimes be found projecting from the surface of the lungs, and widely interspersed in their substance, of quite a different texture from tubercles, being of a very vascular and porous, or cellular nature; perhaps these may be called *sanguineous tumours*. Those upon the surface, are of a reddish colour, and are covered with a smooth membrane. These are often found in those subjects, in which there is a similarly diseased structure in the liver and lymphatic glands, and in the substance of the testicle. Indeed,

when the lungs are diseased, we generally find that the lymphatic glands, and particularly the mesenteric glands, are in the same state. There is one species of tubercle that is very rarely seen,—viz. a soft pulpy tubercle, of a light brown colour." 200.

In *broken-winded* horses, and in some asthmatic subjects, the air-cells are occasionally found ruptured, and several of them communicating and forming a large cyst. This was the case in the lungs of our great lexicographer, Dr. S. Johnson, and is particularly described by Laennec. Earthy concretions are very commonly found about the roots of the lungs, especially in scrofulous subjects. Where cancer of the breast has extended to the bone, the lung beneath will generally be found affected also, particularly where the cancer has been of that kind denominated "*fungus hæmatodes.*" If a patient die of irritation in the larynx, the lungs will be found congested, and will not collapse. In croup, the membrane may be traced into the branches of the bronchia, and the cells are filled with purulent matter.

The pericardium, our author observes, is very frequently found adhering to the heart. "If," says he, "we compare the number of cases which are now seen of this (which is the consequence of violent inflammation of the internal surface of the pericardium) with the importance which the elder authors attached to the few cases recorded, we should be inclined to say, that the disease of pericarditis must be much more common now than formerly." We think there can be no doubt on the subject. In chronic cases Mr. Shaw has found the coagulable lymph a quarter of an inch in thickness, and in several distinct layers, the most internal

are often found in layers; and this, it is said, argues a successive formation; or they are attached to the sides of the arteries, where their coats are diseased, and their attachment does not appear to be accidental, or owing to the simple coagulation of the blood. In many instances, however, when these coagula are remarkably firm, and such as we might suppose were formed during life, we shall find, upon examination, that the extremity, which is loose, lies in a direction contrary to the course of the blood; a direction, in which we must be sensible it could not have remained during life, for it must have been driven in the direction of the current of the blood, while the root was held nearer the heart. In the centre of many of these coagula, there is an oily fluid, so similar to pus, that I have seen such cases exhibited, as examples of abscess in the interior of the heart." 203.

Of malformations of the heart we shall take no notice. Mr. Shaw thinks that ossification of the aortic valves (one of the most common of the valvular diseases) is so far a natural consequence of old age that it does not produce much distress in a person above the age of sixty; "but in a young person, whose left ventricle is still in a vigorous state, the consequences are terrible; for we find the heart sometimes increased to nearly the size of that of a bullock, and bearing evident marks of inflammation." 204.

Mr. Shaw questions the propriety of ascribing angina pectoris to ossifications of the coronary arteries, since in many old people, who never had the slightest symptom of this disease, he has found the coronary arteries like tubes of bone through their whole course. We believe that the symptoms designated by the term angina pectoris are not now generally attributed exclusively to ossification of the coronary arteries —but to a debility of the central organ of the circulation, by whatever cause induced, which disqualifies it for performing its function, at times, and especially when any exertion is used in going up an ascent. In short, many organic diseases of the heart and its vessels and valves will produce all the phenomena of angina pectoris. Mr. Shaw has found, what corresponds with the best observers, that when the heart is very large, there is generally a stricture of the aorta. "In such a case, the state of the heart is very analogous to that of the bladder, when there has been a stricture of the urethra." Those dilatations of the aorta, so common in old people, Mr. Shaw, thinks, may be the primary state of an aneurism. "For if we minutely examine an artery which is dilated, we generally find one point thinner than the rest, which, had the patient lived longer, would probably have given way, and then an aneurismal tumour would have been formed at the part."

Mr. Shaw combats the pinciple of Dr. Jones, that the middle and internal coats of arteries should be cut through by the ligature, to facilitate, or rather secure the obliteration of the arterial tube. Our readers are all aware that a very slight pressure indeed on an artery will quickly arrest the flow of blood through it, as effectually as if tied with the greatest degree of force. Mr. Shaw contends, moreover, that the vessel must be much weakened by the process of Dr. Jones, since blood may escape (as injection does in the dead body) by the side of the ligature into the neighbouring cellular structure.

7. *Nervous System.* In those parts of the work, particularly where the nervous system is the subject, we trace the ideas of Mr. Charles Bell—a circumstance which not a little enhances the value of the publication, in our eyes, and which induces us to go much farther in this analysis than we otherwise would be inclined to go. Another reason why we protract this article is, that the book cannot be expected to travel in the main circuits of this Journal, its destination being principally for the student, as its title imports; consequently its pathological and physiological ingredients will be directly disseminated through the present medium, to an extent which they could not otherwise reach for years—and then through circuitous channels. We are not without hopes, also, that the specimens herewith laid before the public, will tend to increase the circulation of the work itself, among a class of medical society for which it seems

and the plexus of the nerve, in its course upon the œsophagus, it will not appear surprising, that disorder of the uterine system, affecting the stomach, and also primary disorders of the stomach itself, should produce the *globus hystericus*, or paralysis, or spasms of the pharynx and œsophagus. Although the heart and stomach be separated by the diaphragm, yet through this nervous cord they are united: and this explains why disorder of the stomach should produce such changes on the heart's action. The pause, or intermission of the pulse, which, in many diseases, is a fatal symptom, is often produced in a manner less alarming—merely by irritation of the stomach. Seeing these many connexions of the stomach with the vital parts, through this nerve, our surprise ceases at a blow on the stomach proving instantly fatal." 248.

Mr. Bell, in his lectures, has, for some time past, shown that all the spinal nerves, the sub-occipital, and the *fifth*, have several essential circumstances in common—for instance, they have each two distinct roots, with a ganglion on one of these roots—that they are exquisitely sensible—that they are distributed to muscles for locomotion and action—that each nerve is distributed to its corresponding division of the body, without ever taking a longitudinal course thither.

"When we examine the origin of the nerves minutely, we shall find, that the Vth is the only nerve of the skull, which comes off in such critical circumstances, as to have a root from the crus cerebri, and another from the crus cerebelli,—which parts may, by comparative anatomy, be proved to be the continuation of the anterior and posterior divisions of the spinal marrow. The Vth will also be found to be the only nerve within the skull, which has a ganglion at its roots. Those who have dissected the deep nerves of the head, or who have attempted to demonstrate the branches of the Vth pair to students, will be able to estimate the value of this view.

"I have examined the nerve repeatedly, in its whole course, in man, in the horse, the ass, the calf, and the dog. By these dissections, I have been convinced, that, in every respect, the Vth pair resembles the spinal nerves, even in the peculiar form of its ganglion and plexus. In the horse, there is as distinct a plexus formed by the branches of this nerve which go to the different parts of the head, as there is formed by those which go from the axilla, or loins, to supply the limbs. I conceive, also, that the form of the part from which this nerve arises, is analogous to that of the spinal marrow where the axillary nerves take their origin. If this be correct, it will be another proof of the similarity of the Vth nerve in the spinal nerves." 256.

In this investigation, Mr. Shaw has had to correct the very common mistake that the great sympathetic has its principal connexion with the nerves of the head, through the medium of the VIth pair. The branches which *appear*

to go to the VIth pair, go, in reality, to the ganglionic portion of the Vth. By the establishment of this fact, Mr. Shaw thinks it is proved that even the connexion between the sympathetic and the Vth is similar to the union of the sympathetic with the ganglionic roots of the spinal nerves.*

Mr. Shaw makes many ingenious remarks on the nerves of the face, especially the portio dura of the auditory nerve, and its connexions, but we cannot transcribe or abbreviate them. Upon the great sympathetic and its connexions also, much interesting matter is introduced. We shall find, he observes, that each cervical nerve has a double root—i. e. one from the anterior, and the other from the posterior column of the spinal marrow—that the one from the *posterior* has, immediately before it joins with the anterior, a ganglion formed upon it; and if we carefully examine this, we shall find that, from each ganglion, a small nerve is sent off, to [illegible] with the sympathetic. This circumstance was entirely overlooked by Bichat, who has described the ganglion, but not the nerve of communication. Had this great anatomist lived to investigate farther, he would probably have given up the idea of the sympathetic being a part entirely distinct from the system of the spinal nerves.

Mr. Shaw's chapter on the surgical dissection of the neck and head contains matter that every surgeon should carefully study.

And here we must close our notice of the work, having passed over entirely the great body of it, as occupied in anatomy and physiology, on which we could not enter. We shall not go the length of one of our cotemporaries, in asserting that Mr. Shaw's book will supersede all others of the kind, because we are convinced that, in the present state of things, such an event cannot happen, even if the Angel Gabriel were to write a student's manual. On the contrary, we are disposed to think that the work will be more popular among those classes for whom it was least designed—namely, those at a distance from the metropolis, who are slowly initiating themselves, at county hospitals and infirmaries, in the knowledge of anatomy and dissection—or who, having concluded their studies, may be anxious to profit by all the chances of *post mortem* investigations, which private or public practice may throw in their way. We repeat it, as our opinion, that the work is too good for the *migratory annual* student, who thinks his time will not

* See a paper in the Philosophical Transactions of the present year on the subject.

admit of more knowledge than the most laconic manuals of anatomy can supply. To this class (unfortunately a large one) we fear Mr. Shaw's book will not prove quite satisfactory; but he may well console himself by reflecting and knowing that his labours will circulate widely among those who are most capable of rightly appreciating their value.

——Neque te ut miretur turba labores. *Hor.*

VII.

I. *The History of Plague, as it has lately appeared in the Islands of Malta, Gozo, Corfu, Cephalonia, &c. detailing important Facts, illustrative of the Specific Contagion of that Disease, with particulars of the Means adopted for its Eradication.* By J. D. Tully, Esq. Surgeon to the Forces, Member of the Ionian Academy, late Inspector of Quarantine, and President of the Board of Health of the Ionian Islands. One vol. 8vo. pp. 292. London, 1821.

II. *Researches into the Laws and Phenomena of Pestilence: including a Medical Sketch and Review of the Plague of London, in* 1665: *and Remarks on Quarantine. With an Appendix: containing Extracts and Observations relative to the Plagues of Morocco, Malta, Nova, and Corfu: being the Subject of the Anniversary Oration, delivered before the Medical Society of London, in the Spring of* 1820, *and published at their Request.* By Thomas Hancock, M. D. Licentiate of the Royal College of Physicians, and Physician to the City and Finsbury Dispensaries. One vol. 8vo. pp. 379. London, 1821.

"While vapours blown by Auster's sultry breath,
"Pregnant with *plagues*, and shedding seeds of death,
"Beneath the rage of burning Sirius rise."—Iliad. V.

"I have sent among you the *pestilence* after the manner of Egypt; and I have made the stink of your camps to come up into your nostrils."
Amos.

Few nations, at one or other period of their history, have escaped the ravages of plague; and unfortunately the inhabitants of those countries in which it seems to have fixed

its headquarters, are so strongly impressed with a conviction of its irresistible power that they succumb before it, without a struggle, regarding its appearance among them as a direct visitation from Heaven, and considering any measures of prevention or resistance as little less than impiety! What can be more reasonable than that, among such people, the fomites of the disease are never extinct, though various circumstances may render them at one time apparently epidemic, and at another nearly dormant. These vicissitudes have furnished the anti-contagionists with a pretext (not a very plausible one either) for confounding PLAGUE with those endemics which rise and fall at particular seasons of the year, and depend, as far as we have yet been able to ascertain, on certain conditions of air and earth, not cognizable indeed by the senses, but too evident from their deleterious effects on the human constitution.

Happily for mankind, the concurrent testimony of ages has induced a general belief that plague arises from a specific contagion—that it is communicated by contact (or exceedingly close proximity) alone—and that seclusion and separation are the only means of checking, and ultimately exterminating its power.

Fanciful theorists, indeed, have started up in all ages, to deny the contagion of plague, and generally have forfeited their own, and thousands of other lives, in consequence of their temerity. Thus, during the plague at Marseilles, in 1720, the physicians *in Paris* determined that it was not contagious, and their delegates at Marseilles acting conformably to this opinion, *sixty thousand* people fell victims to the disease in the space of seven months. A similar prepossession induced the faculty in Sicily to declare the plague which ravaged Messina in 1743, not to be contagious, and forty-three thousand lives were lost. The doctrine of non-contagion, however, being in these instances so immediately refuted by facts, these cases can only be considered as insulated exceptions to the general belief in contagion. Those, too, who have had most experience in plague, are those who most confidently believe it contagious; while the non-contagionists are generally speculative closet physicians, who have seen little or nothing of the disease. Thus Russel, Howard, Fra Luigi de Pavia, Raymond of Marseilles, Giovanelli of Leghorn, Sir James M'Grigor, Sir Brooke Faulkner, and, in fact, all British physicians, who have had any experience of plague, assert its contagious character, while Dr. Maclean, determined on its being non-contagious long before he ever visited those countries where it is prevalent, travelled with his eyes blinded to the most

obvious facts, (for surely a brace of pestilential buboes in his own groins were argumenta ad hominem,) and returned with all that he could scrape together, on one side of the question, but carefully slurring over all that presented on the other. As an example of this sort of *fair* investigation, we shall here bring forward an important fact stated by Mr. Tully, and personally witnessed by Dr. Greaves, Inspector of Military Hospitals, and Superintendent of Quarantine in the Island of Malta.

An extensive building at the extremity of Strada Vescoso, in Valetta, had, for years, been occupied as a military hospital, and was only separated from Dr. Greaves's house by a narrow lane, not more than ten feet in breadth. During the prevalence of plague, this hospital was occupied by the sick of one of the battalions quartered in the town, admitting the ordinary proportion of the common diseases incidental to the climate, the season, and military life. The under apartments of the hospital were partitioned into several distinct habitations, dry and comfortable; while the site of the building itself was allowed by all to be one of the healthiest in Valetta. The several entrances to these apartments were lofty and spacious, and each dwelling gave an asylum to Maltese—in the proportion of about seven to each apartment. Plague, which was making havoc in the neighbourhood, at length penetrated these apartments, seven in number, four of which were, in a few days, completely depopulated; while in the remaining three, two individuals only, of each family, escaped. Independently of the ravages that were committing below, many of the families in the immediate vicinity were attacked, "contagion extending indiscriminately to the upper as well as the lower apartments of these dwellings." The inmates of the hospital were closely shut in, every avenue to intercourse between them and the inhabitants of the town was securely guarded, and all communication effectually cut off. What was the consequence? "While plague was running its destructive course in every angle, every individual within the walls of the hospital continued perfectly free from danger, and this exemption from plague continued throughout the disease." P. 250.

If the non-contagionists remark that in marshy countries, and during the prevalence of miasmal fevers, the lower ranges of buildings sometimes suffer, while the upper are free from disease, it may be answered that to talk of marsh miasmata at Malta is to talk nonsense. Remittent and intermittent fevers are there almost unknown, and there is but one single spot on the whole island that ever offered

any thing like a marsh, and little or no vestige of it now exists.

"But the most extraordinary part of this statement is yet untold. I have been assured by Dr. Greaves, that the circumstance here narrated, relative to the security which seclusion afforded to the sick in the hospital in Strada Vescoso, was communicated by him (and no doubt with the same candour and view to truth with which he was pleased to communicate it to me,) to Dr. Maclean, the learned author of '*Results* of an Investigation respecting epidemic and pestilential Diseases,' who was then at Malta. Dr. Greaves was not satisfied with stating the fact, but he conducted Dr. Maclean, as he did myself, to the very spot, clearly pointing out every circumstance which, in his opinion, was well calculated to throw light upon the subject of Dr. Maclean's investigation. Now, with all deference to Dr. Maclean, I cannot help remarking, that his taking no notice whatever, in his publication, of this truly important information, does not argue much in favour of the candour with which he either treated the public, or conducted his investigation; for, however the fact might have militated against his favourite doctrine, it behooved him to state it. As he has not done so, we certainly are warranted in concluding that, having long previously established in his own mind that contagion was a nonentity, the information he required at Malta was of that nature which he considered it better to consign to oblivion than to submit to the test of inquiry. Facts are stubborn things, and I candidly confess that the one just recorded is perfectly brought forward; but were I to act otherwise, I should be as culpable as Dr. Maclean, who, in presenting to the public his 'Researches,' withheld it." 260.

These "*Researches*" met their well-deserved fate in the Plague Committee of the House of Commons, and are now doomed to the mouldering shelves of the booksellers, or such other purposes as they may be fit for.

While we agree with Mr. Tully in denying that the contagion of plague is diffusible in the atmosphere to a great distance, as maintained by Dr. Calvert, we cannot coincide in the opposite opinion, that climate, seasons, and the extremes of heat and cold, have no influence whatever on the rise and fall of this dreadful scourge. We all know that caravans are constantly conveying susceptible goods from Damascus and Aleppo to Bussorah, from whence they are shipped for the East Indies; yet it does not appear that the plague ever reached Guzerat, Surat, Bombay, or any other part of the East Indies. Mr. Tully himself thinks—"it is not improbable that this exemption may be owing to the high atmospheric temperature in those latitudes being suffered to destroy the contagion of plague—a temperature unknown in those countries which are the constant seat of this malady." If Mr. Tully had resided in the East, and

also in Malta, Gibraltar, and other Mediterranean ports, where plague has visited, he would have known that few years pass in these latter places without a complete tropical temperature for many weeks each hot season. But Dr. Russel has shown that, speaking generally, the plague rises and falls at certain *seasons*, in Aleppo, and therefore while we grant that the cause of the disease is *always* contagion, we have no doubt that the activity of the poison is increased, diminished—perhaps sometimes almost annihilated, by climate, seasons, and other atmospherical or terrestrial influences, with the nature of which we are not yet sufficiently acquainted. Why should not this be the case with plague as well as with small-pox?

The opportunities which have been, unfortunately, afforded to British subjects, of late years, to ascertain the true nature of plague, have been so numerous, that all speculations on the subject can be brought to the test of practical inquiry. The author, whose work we are reviewing, had himself nearly six years practice, as chief of the health department in those countries so often visited by plague, and consequently his observations are entitled to great attention, however some people may differ with him in certain matters of opinion or doctrine.

The 2d chapter of the work before us is on the plague in Malta, as it occurred at different periods, from the year 1592 to 1813. Into an account of the earlier plagues, it would be improper to enter here, and the recent visitation is sufficiently fresh in the memory of the profession and public at large. It has been too justly observed by a modern philosopher, that "he who has never suffered extreme adversity, knows not the full extent of his own depravation." It is on such awful occasions as these, when pestilence is abroad, and death mowing down his victims, that the dark as well as the bright side of human nature becomes particularly developed!

"Alarm, (says Mr. Tully, speaking of Malta in 1813,) every where prevailed. Self-preservation was the only acknowledged law, and all alike dreaded their fellow-creatures.

> "Dependents, friends, relations, Love himself,
> "Savaged by wo, forgot the tender tie,
> "The sweet engagements of the human heart."

Few have been so successful (we hope we cannot properly say—happy) in delineating, with disgusting fidelity, these dark traits of the human mind, as Lord Byron. We envy not his Lordship's feelings—we admire not his taste—we approve not his philosophy in this line of conduct. Were

these depravities of our nature held up for detestation, there would be some excuse; but when they are rendered familiar, or even attractive, by the splendour of poetry, they are calculated to debase the human soul to this frightful point, rather than elevate it to a nobler aim and destiny.

The decline of the plague of 1813 at Malta is attributed, and we should suppose justly, to the energetic measures of Government—particularly of Sir Thomas Maitland, whose arrival on the island formed a "particular era in the history of the Plague of Malta;" the disease being every where "arrested by the decided and energetic system established and enforced by His Excellency." This conquest over the annihilating monster was not an easy one—"Casal Curmi boldly contesting, inch by inch, every effort which was made for the destruction of the disease." For although the necessity of the restrictive system was fully recognised, yet evasion on the part of those who are ever ready to profit by the general consternation around them, occurred, and thus a public calamity was converted into the means of furthering private and nefarious ends! By the early plunder and concealment of infected goods, disease was kept alive in many parts of Malta, although the wretches thus offending against the community fell daily sacrifices to the wrongs they had committed. On a sudden, however, "that arm was raised which, under providence, was destined to crush the desolating foe."

In the Casal Curmi the plague for a long time bade defiance to every exertion, and thus favoured the idea of its dependence on atmospherical constitution. But His Excellency had

conceive how the circumvallating corps escaped—we mean it is difficult to every one but an anti-contagionist.

"For all is easy to the *æthereal* kind."—Odyssey.

So soon as the disease was confined within the walls of Casal Curmi, all anxiety respecting further danger ceased; "and although the plague was in the very heart of the country, it produced no more dread or alarm than if no such disease existed. No precautions were thought of *without* the cordons." 64.

"It is worthy of remark, that whilst many of the inhabitants of Valetta and of some of the casals, were, after the first alarm had subsided, wrapped in fatal security, unapprehensive of any dangerous result, the inhabitants of the three cities Vittoriosa, Cospicua, and Senglea, were more alive to the true consequences of the evil, and under this alarm immediately set about concerting measures for their own safety.

"The city of Valetta was, at the time alluded to, in open communication with all the other parts of the island, of course, excepting the lazaretto. The inhabitants of the three cities above mentioned, jealous of their safety, and impressed with the conviction that contagion was abroad, had recourse to the bold step of cutting off all communication with the capital, and for a time, even government officers, under the seal of authority, were peremptorily denied a landing by the populace of Senglea." 67.

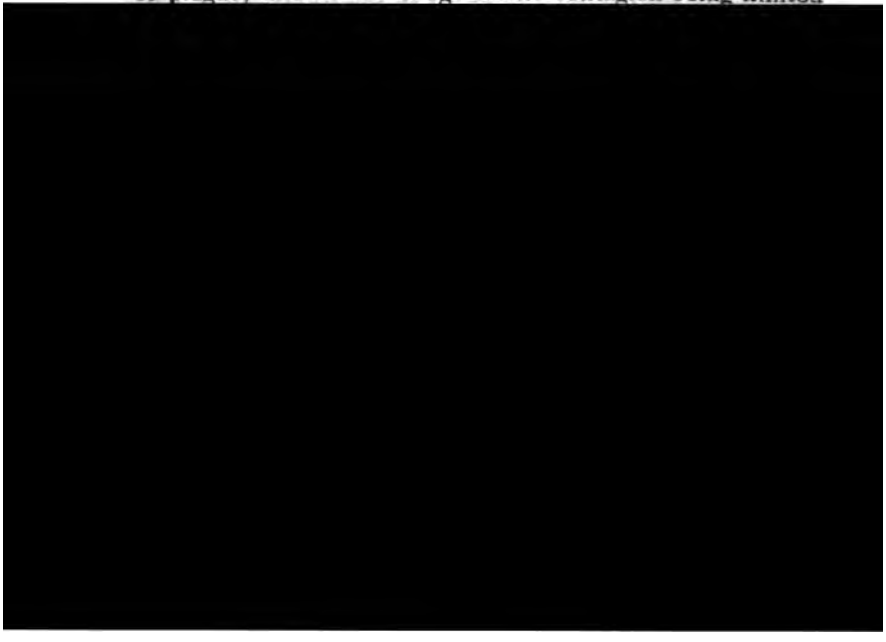
This bold step, whether legal or illegal, saved the inhabitants who resorted to it. The population of these three cities exceeded that of the capital. Our author concludes then, that the late plague of Malta offers in its progress the most irresistible proofs of the specific contagion of the disease, and, in pursuing it to its close, we find its history still true to the same principle.

The 3d chapter discloses some curious information relative to the island of Gozo. The inhabitants of this little spot, aided by the exertions of Government, took the most rigorous precautions to cut off all communication between Valetta and themselves, as soon as the plague broke out in the former place. In consequence of this, they "enjoyed an uninterrupted good health," during the whole period of the disease in Malta. When all restrictions were taken off in the latter place, the communication opened, but the consequences were soon seen. A man of the name of Galen, an inhabitant of Casal Curmi, secreted a box of infected clothes previously to the circumvallation of the above ill-fated town. When the pratique was taken, he recovered the box, and passed over to Gozo, of which he was a native. Two or three days after his arrival there, viz. on the 22d of

February. 1814, he died suddenly at his own house, in Casal Caccia, and, as there was no suspicion at the time, his corpse was carried to the parish church, and the usual funeral ceremonies performed. On the 28th of the same month, Rosa, his daughter, was taken ill, and being carried to the hospital, she died in a few hours of the plague. The alarm was now given, and in a few days several inhabitants of Casal Caccia died, among whom was the priest who assisted in Galen's burial. The infected part of Gozo was now immediately circumvallated, and the disease thus prevented from spreading, while the proper processes of purification soon put an end to the disease within the lines. Out of about 15,000 souls 96 died on this island. Among the latter was Dr. M'Adam, physician to the forces—a non-contagionist. It is a remarkable fact, Mr. Tully observes, that of the many British medical officers employed in the recent plagues that have occurred under the British flag, within the Mediterranean, "the disbelievers in the long-established doctrines of the specific contagion of the disease were *alone* its victims."

The 4th chapter, on the plague of 1813, 1814, on the banks of the Lepanto, and in Albania, is not very interesting or instructive, dealing too much in generalities, and too little in specific facts. We shall therefore pass it over intact.

The 5th chapter, on the plague at Corfu, is the longest, most elaborate, and most circumstantial, in the volume. It is apparently that one which, in Mr. Tully's opinion, contains the most decisive evidence of the contagious nature of plague, and of the range of the contagion being limited



Leftimo, on the Island of Corfu, that plague was first discovered in December, 1815. It was found, on investigation, however, that a fever had broken out among this little community, more than a month previously, which had assumed a most malignant form, thirteen out of a population of fifty having died. The cause which superstition had assigned for this scourge, was the perturbed spirit of a man who had been murdered in the neighbourhood of the village some months before. To make every atonement to the angry spirit, church-offerings, prayers, and processions were tried in vain. The more probable causes, and more physical at the same time, will become obvious in the following extract:—

"The village of Marathia is situated on a little eminence or ridge running along the southern extremity of the island, and nearly dividing it, looking toward both seas; on either side of this ridge, the ground runs into a flat, and stagnant pools and marshes every where present themselves. During the autumnal months, the remittent fever had been most destructive in this district, very few having escaped its attack. The season had been extremely mild, the rains set in earlier than usual, heavy but partial, and were followed by a long drought and heat unnatural for the advanced season of the year, the thermometer being seldom below sixty-six, with a constant *sirocco*, or southeast wind." 90.

Mr. Tully ingenuously confesses that, when he reflected on the topography of the place, the nature of the disease, the poverty "amounting almost to absolute want," of the inhabitants, the natural insalubrity of the whole district, the inland residence of the peasantry, surrounded by marshes, and "wholly unconnected with commerce," he and those who acted with him were impressed with a conviction, that "the disease before them was the offspring of the soil."

"*Conceiving* (however) that it was not only of a malignant, but also of a contagious nature," our author determined to adopt the strictest measures of precaution. Accordingly a board of health was constituted, two professional gentlemen were despatched to Marathia, and the infected village was circumvallated as Casal Curmi at Malta. Notwithstanding these precautions, however, the disease was *disseminated*—at least dissemination was inferred, as "a disease similar to that with which the inhabitants of Marathia were afflicted, had broke out in the neighbouring villages." The line of contagion or contact was traced to a knot of *papâs*, or clergymen, from various villages, who had, previous to the circumvallation, assembled at Marathia, to assist the inhabitants in a religious ceremony for appeasing

the angry spirit, the supposed cause of all the mischief. The medical inquisition accordingly investigated this new route, and "disease was traced, step by step, to the residence of every individual who had assisted in the ceremony at Marathia, and from them again to their friends, &c." We need hardly inform our author that these clergymen might have become affected with febrific miasmata at Marathia, as readily as with contagion; and among such miserable, dirty, and superstitious wretches, there can be little difficulty in conceiving that the disease would continue to be propagated from individual to individual. A report to Government having been drawn up, in conformity with the above views, the quarantine regulations were put in still more rigorous execution, and an additional cordon of troops was placed around the enemy. "The erection of barriers followed, and thus all communication was cut off." Well! what was the result of all this? why that, "notwithstanding all these precautionary measures, disease was every day breaking forth"—and that too, in villages *without* the cordons! It is true that Mr. Tully attributes all these disappointments to want of integrity in the *primates*, and violation by stealth of quarantine laws: but we confess that his statements are far from satisfying *us*, who are decided believers in the contagious nature of plague. We shall, however, extract one of the most circumstantial facts which Mr. Tully has adduced, in order that we may not be considered as hiding away contagious matters, like the *papâs* of Corfu. Speaking of the Herculean force of the disease, and its power of eluding all their vigilance, he details an incident that occurred at the

church, had been included in the bills of mortality nearly three months previous. The fact of the robes having been deposited there, was known to many of the friends of the deceased, but only made known to the public authorities on the eve of pratique being granted, as the church in question had been long the residence of the officer commanding the cordon. As it was necessary that the robes should be expurgated, the primates dreaded that it might interfere with the intended pratique; they therefore persuaded the officer commanding, that the effects belonging to the church had been placed there for security long before the breaking out of the plague. Confiding in this assertion, the officer commanding, imprudently, and without reference to the officers of health, yielded to the request, that the lay brother, the only person surviving belonging to the church, should be permitted to expurgate them. The unfortunate man proceeded to fulfil the duty thus imposed upon him by the inhabitants on the morning I saw him; he had not been absent more than an hour, when he returned under an escort to his house. Soon after his arrival he was seized with giddiness, and other symptoms of plague, that led to the suspicion upon which I was called to decide.

"I had scarce terminated my inquiry, and issued orders for the unhappy man's removal to the lazaretto, when walking up the street, I was requested to return, as the man was apparently dying, and in an unfit state for removal; before I reached the door he was no more. Three hours had only elapsed from the time he had quitted his house in perfect health. This was one of the most sudden cases I ever witnessed; yet this man's sufferings did not appear to be by any means severe.

"The unfortunate person, happily, had no family, not even a servant. We were perfectly satisfied that he had had no communication whatever with any individual from the first appearance of disease in the village; and this, more from his habits of retirement than from any dread of disease. By this fortunate circumstance, the malady was checked on the instant; the effects of the deceased, together with the church robes, were sent to the lazaretto, and the house immediately expurgated. No other case of plague occurring in Perivoli, after the lapse of a quarantine of observation, the pratique, which was by this fatal accident interrupted, was granted with the fullest security to the country." 107.

We regret that Mr. Tully should not have stated what those "other symptoms of plague" were, thus leaving us in darkness.

During a period of nearly two months, in which upwards of three hundred of both sexes, and all ages, fell victims, our author acknowledges "the hourly disappointments, hopes, and fears, which accompanied them in every stage of their operations." At length one decisive step was taken. They pitched upon an eligible spot of ground on the seashore, to which they conducted every infected and every suspected person in the district, amounting to 300 and up-

wards, where they were guarded and double guarded till the disease ceased—the habitations, &c. which they left, being, of course, expurgated—that is, we suppose, exterminated.

Knowing, as we all do, that every epidemic will have an end, sooner or later, we greatly suspect that this last move to a more healthy situation would have produced the consequences detailed, whatever was the nature of the disease. But we will not "argufy the topic" any farther here, since we believe the point will never be settled by argument.

The *sixth* chapter of the work before us, contains much interesting matter for those employed in quarantine service, but not requiring any particular notice in this place.

Chap. VII. No sooner had our author performed 40 days of foul quarantine at Corfu, than he was despatched with a "select corps of expurgators," to the Island of Cephalonia, where the plague had broken out, and was making alarming progress. The origin of the pest here was, according to Mr. Tully, "early ascertained." The island is of considerable extent, the population being much diminished, and agriculture still more so. On this account, about a tenth of the population annually migrate to the neighbouring continent, to cultivate and reap the harvest of a foreign land. The mode in which the plague was introduced into Cephalonia is thus stated. Shortly after the breaking out of the disease on the opposite coast, (of the true nature of which there is no evidence) Antonia Venturato and some companions, on their return to Cephalonia,

strongly *suspected* that the Turks were sufferers from that disease." What would Sir Gilbert Blane say to this kind of medical logic, or evidence, even although on the side of contagion? The reason why we examine the allegations with rigour is, that we firmly believe in the contagious character of plague; and, on that account, cannot allow suspicious evidence to pass, for the purpose of being held up by the anti-contagionists, as the general grounds on which we build our faith. No. We will not grant them this advantage.

To return to the narrative. Venturato died on the second day of his disease, in strong convulsions. He was examined, after death, by Dr. Metasea, "a physician of talent and reputation," who reported that there were "no external appearances that could lead to any opinion of the nature of the disease." Nine persons soon died of this disease, in the village of Comitato, generally after a few hours' illness. A medical deputation being despatched to the scene of alarm, the body of Venturato's brother, who also died of the disease, was examined, and petechiæ of a large size were found thereon, as also a carbuncle on the temporal muscle. In several others the same petechial eruptions were observed, and some buboes were found. Mr. Tully having arrived in the vicinity of the village determined on making a personal examination of the state of affairs.

"Here the scene was melancholy and distressing. In the general terror which was excited, the sick were heaped indiscriminately together, with the whole of their families, in a house selected for their seclusion, at one extremity of the village—where all, without distinction, were placed—the dead, the dying, the infected, and many even free from disease. The state of the latter was of short duration, as there appeared little hope of escape, immured as they were within the walls of danger, and surrounded by a mass of contagion.

"The consequences of these unfortunate measures were an attempt at concealment on the part of all attacked with disease; and, the more effectually to evade discovery, many buried their fathers, mothers, husbands, and children, in their gardens, or within their houses; indeed, such was the state of desperation to which they were reduced, that some were known to have thrown the bodies of the deceased relatives into their cisterns." 163.

Our author took what measures he could in this exigency —directed them to have their houses, streets, and lanes thoroughly swept and cleansed, as a preparatory step, while poultry, cats, and dogs were prohibited from prowling about, and thus conveying infection from place to place. A small house at the water's edge, in the bay of St. Pantaleone, was

pitched upon for an hospital, and here the quarantine camps were erected. To this place the sick and suspected were carefully conveyed, and proper quarantine regulations put into execution. After all were removed to this romantic little bay, new cases of plague occurred daily in the encampment, which was no more than might be expected. These, of course, were instantly put under medical treatment, which is here, as it were incidentally, alluded to.

"The whole of them were then placed under medical treatment, which consisted in a gentle purgative, followed by mercurial inunction, proportioned to the age and constitution of each individual. The mercury was persevered in morning and evening, until the system was under its influence; this practice was only resorted to in the cases of the strongly suspected, who of course were received without any symptoms whatever of plague being on them.*

We cannot enter into the long and minute detail of the ways and means taken for the suppression of this dreaded contagion—suffice it to say that they were successful, and appeared to reward the labour and care bestowed upon them.

The plague of Cephalonia offered nothing in its general character different from the disease of Corfu. No recoveries marked its first appearance, death following every attack until the arrival of the quarantine officers and 59 persons having fallen a sacrifice to the disease. Mr. Tully's experience does not coincide with a very commonly received opinion, that plague varies in its character, from the period of its commencement till its final termination. In the cases

it which were guarded by 1200 men. The inner cordon of troops was only sixty paces from the infected habitations, and no case of the disease appeared among them or ouside of the circumvallation, during the whole period of the plague raging within. This was undoubtedly a most decisive proof of the contagion of plague, and of its limited range.

The 9th chapter embraces some general observations arising out of the subject matter of the work, which we shall briefly touch upon before we close this article. The first conclusion which our author draws—a momentous one indeed—is, that the history of the disease, as far as his experience goes, offers no one instance of any person being attacked with the disease "by near approach to, or by breathing the same atmosphere with the sick; whilst every attack, in many hundred cases that came under his own eye, was satisfactorily traced to positive contract with infected persons or things." In all cases where communication was cut off, danger was unknown—the disease offering "respectful regard for all public authorities of every denomination, and every where retreating before the bayonet and the badge of office"—circumstances which, Mr. Tully justly conceives, distinguish it from miasmal or atmospheric diseases. As additional proofs of his position, he alludes to the well-known fact, that merchant ships from Alexandria, Smyrna, and Constantinople, with their crews labouring under plague, have repeatedly, within the last three years, entered almost every port in the Mediterranean where the British flag was flying, (and many such instances took place during the author's residence in the Ionian Isles,) without being productive even of alarm, much less of danger—ships under such circumstances remaining for days in strict quarantine, and closely surrounded by guard-boats.

"Plague, to keep it out of a country, although at the very threshold, requires that it should only be treated as plague, subjecting it to the common rules of quarantine, and that upon the plain and simple principle of alone considering it what it truly is, contagious, and alone contagious." 223.

The author naturally slides to the subject of quarantine, on which he makes many important remarks. Experience, he observes, sufficiently proves—

"That susceptible effects, of whatever texture, and however impregnated with pestilential virus, can be securely purified by subjecting them to the combined, or even individual action of pure air, and water; and the more readily, when immersion is followed up by exposure to the all-powerful influence of certain degrees of heat. This was ascertained by actual proofs, both at Corfu and Cephalo-

nia, but more especially at the latter island; and the period necessary for the purification of contaminated goods was found to be extremely limited under these processes. At Cephalonia, the tents which had been employed in our plague camps, after the simple process of being washed half a dozen times in salt water, and dried in the sun, were subsequently (with the most perfect conviction of the efficacy of the means of purification) delivered by me into His Majesty's stores, and soon after employed in the encampment of the garrison. Previous to our being thoroughly satisfied, that this process would prove effectual, many articles of this description, from a suspicion of danger, had been destroyed. Our first trials originated in necessity, and, from the success that followed, we felt ourselves authorized to pursue those trials, which terminated as favourably as we could possibly wish." 229.

From this it would appear that every bale of goods received into a public lazaretto may, with proper attention, be quickly freed from all infectious properties—and that, if danger does exist, it will speedily declare itself.

"This admitted, we are perfectly authorized to conclude, that, under strict and efficient means, the actual state of the most extensive cargoes of susceptible goods, can be ascertained within fourteen days." 230.

At all events, he thinks that a quarantine expurgation, extended to 21 days, would be perfectly efficacious, under the most suspicious circumstances."

Our limits have already been considerably overleaped, and therefore we shall notice but one more subject, namely, the question whether man be really susceptible of repeated at-

[redacted]

tion at issue. We give Mr. Tully great credit for his zeal and ability in this investigation, and although we doubt some of his premises, we think him right, on the whole, in his conclusions. We fully coincide in the propriety of his measures for preventing or suppressing the contagion of plague, when it unfortunately appears, and we part with him entertaining both respect and esteem for his professional abilities and humane character.

When we had finished Mr. Tully's work, the elaborate researches of Dr. Hancock were put into our hands, and like Sisyphus we had to roll the stone once more to the summit of the hill! We have perused Dr. Hancock's work, and we accord to him the meed of applause for candour, zeal, research, aad ingenuity. That it would be totally impossible to give a proper analysis of his work, will be acknowledged by all who examine it, and for the following reasons stated by the author himself.

"Let him (the reader) also notice, that the several parts have a bearing, more or less distinct, upon the general principle; and that the subject itself is vast in its extent, and comprehensive in its relation; so that a view of a single part cannot give a correct idea of the whole, nor ought the whole to be viewed but in connexion with every part." Pref. p. ix.

We shall probably give some account of the scope and tendency of Dr. Hancock's work on another occasion.

VIII.

On the Nature and History of Marsh Poison. By William Ferguson, M.D. F.R.S.E. Inspector of Army Hospitals. (From the Transactions of the Royal Society of Edinburgh.) Quarto, pp. 29. Edinb. 1821.

——Quod sol atque imbres dederant quod terra crearat,
Sponte sua. Lucret

It is nearly correct that one half of life is spent in *unlearning* what was taught us during the other half. This melancholy truth is peculiarly applicable to many parts of medical science, where opinions, apparently based on facts, are revolutionized with astonishing, and sometimes whimsical rapidity. We need go no further than the subject of fever, as far as regards its nature, cause, and treatment, to illustrate

the above assertion. The warfare between the contagionists and anti-contagionists is active on both sides of the Atlantic; but the former class have most power over the minds of the community at large, whose fears and prejudices preponderate, with overwhelming force, on the side of contagion.

One point of the etiology of fever, however, seems to have long rested on a solid base—namely, the agency of vegeto-animal, or, as it is usually termed, marsh miasma, on the human constitution. All conjectures, indeed, respecting the essence or nature of this invisible agent, have subsided, for we now begin to feel a conviction, that the essences of things are beyond our ken. But a great many of the laws which govern, and the consequences produced by marsh effluvium, were supposed to be understood. A very general (but not universal, as Dr. Ferguson supposes,) opinion prevailed, and still prevails, that the agent in question owes its deleterious influence to "vegetable or aqueous putrefaction,"—an opinion which it is Dr. Ferguson's object to prove *unfounded*—"because, as will presently be seen, the marsh must cease to be a marsh, in the common acceptation of the word, and the sensible putrefaction of water and vegetables must alike be impossible, before its surface can become deleterious." It will also be seen, he observes, that a healthy condition of soil, in pestiferous regions, "is infallibly regained by the restoration of the marshy surface in its utmost vigour of vegetable growth and decay." It is very difficult to reconcile this assertion with what hundreds now living saw at Walcheren in 1809,

those effluvia which experience shows to be so deleterious to life. We know nothing of the taste, smell, or sensible properties (if at all sensible,) of marsh miasma, and therefore we are not authorized to say that water is divested of them because it is clear or potable. Indeed we have strong reason to believe that water, in the form of rain, dews, or even collected in wells and cisterns, in unhealthy climes, is often impregnated with what we term marsh effluvium. Still, however, a cloud of mystery hangs over the production and extrication of this febrific agent; for in the same place, and apparently in similar years as to temperature, rains, &c. we shall find the inhabitants and sojourners at one time healthy, and at another sickly.

Dr. Nicholl, a physician of great intelligence and discernment, inspector of hospitals on the coast of Africa, has portrayed the capricious and uncertain generation of fevers there, in very striking colours, but we have not room to introduce his observations in this place.

Dr. Ferguson proceeds to state several interesting particulars relative to the medical topography of those countries through which he has campaigned.

In the month of June, 1809, our army marched through a singularly dry, rocky, and elevated country, on the confines of Portugal, the weather having been previously so hot, for several weeks, as to dry up the mountain streams. "In some of the hilly ravines, that had lately been water-courses, several of the regiments took up their bivouac, for the sake of being near the stagnant pools of water that were still left among the rocks." Several men were seized with remittent fevers before they could leave the bivouac next morning, and that type of fever continued to affect the portion of troops exclusively which had been so bivouacked, for a considerable time. This incident is adduced by our author to prove that the "humid decay of vegetables" is not essential to the production of pestiferous miasmata. But we confess that we see no proof of the non-existence of decaying vegetable and animal substances, when we are bivouacked in the bed of a "half-dried ravine," and near "stagnant pools of water." If we examine narrowly into the state of things, we shall scarcely find a spot of this earth's surface, that is not covered or imbued with both vegetable and animal remains in a state of decomposition; and ready to afford pabulum for the sun's rays, with or without humidity, to extricate the injurious principle in question. Nor do we see any thing in the following passage to contravene, but much to confirm what we have here advanced.

"The army advanced to Talavera, through a very dry country.

and in the hottest weather fought that celebrated battle, which was followed by a retreat into the plains of Estremadura, along the course of the Guadiana river, at a time when the country was so arid and dry, for want of rain, that the Guadiana itself, and all the smaller streams, had in fact *ceased to be streams*, and were no more than *lines* of *detached pools* in the courses that had formerly been rivers; and there they suffered from remittent fevers of such destructive malignity, that the enemy, and all Europe believed, that the British host was extirpated; and the superstitious natives, though sickly themselves, unable to account for disease of such uncommon type among the strangers, declared they had all been poisoned by eating the mushrooms, (a species of food they hold in abhorrence,) which sprung up after the first autumnal rains, about the time the epidemic had attained its height. The aggravated cases of the disease differed little or nothing from the worst yellow fevers of the West Indies; and in all the subsequent campaigns of the Peninsula, the same results uniformly followed, whenever, during the hot season, any portion of the army was obliged to occupy the arid encampments of the level country, which at all other times were healthy, or at least unproductive of endemic fever." P. 5.

Those who have travelled through, or resided any time in Sicily, are familiar with circumstances of the above description, of which Irvine and Boyle have related many particulars. From the former of these authors we shall make an extract illustrative of the sentiments here advanced.

"Sicily is penetrated in several directions by ridges of primitive hills of considerable height: between these are numerous water courses, which are dry in summer, and occasionally filled by torrents in winter. They are designated by the Sicilians, FIUMARI, and

tion. Thus some places in Sicily, though on very high ground, are sickly; as Ibesso or Gesso, about eight miles from Messina, situated upon some *secondary* mountains lying on the side of the primitive ridge which runs northward toward the Faro, which has always been found an unhealthy quarter for English troops. It stands very high; but still there is higher ground at some miles distance. Water is scarce here, and there is nothing like a marsh. —At this station, however, sickness seldom occurs "unless after rains falling while the ground is yet hot, that is, during the heat of summer, or early in autumn, when all circumstances combine for the production of miasmata." *Irvine*, p. 6.

The medical topography of Lisbon and vicinity is interesting. The breadth of the Tagus, at this capital, is not more than two miles—but it is the boundary betwixt sickness and salubrity. The villages and hamlets scattered on the south or Alentejo side of the river—a soil dry superficially, being perfectly flat and sandy—are the most pestiferous abodes. The sickly tract is not confined to the immediate borders of the Tagus. Salvatera, a large village about a mile inland, though reputed healthy till the beginning of autumn, is then deserted by every one who has the means of escape.

"In their superstitious fear, the inhabitants declare, that even the horses and other animals would be seized with fever if left behind, and therefore they always remove the royal stud. The country around is perfectly open, though very low, and flooded with water during the whole of the rainy season; but at the time of the periodical sickness it is always most distressingly dry; and exactly in proportion to the previous drought, and consequent dryness of soil, is the *quantum* of sickness. I have visited it upon these occasions, and found it the most parched spot I ever saw. The houses of the miserable people that were left behind being literally buried in loose dry sand, that obstructed the doors and windows." 6.

Dr. Ferguson adduces another example of this kind near Ciudad Rodrigo, situated on a rocky bank of the river Agueda, a remarkably clear stream. The approach to this town is through "a bare open hollow country, that has been likened to the dried-up bed of an extensive lake. Upon more than one occasion, when this low land, *after having been flooded in the rainy season*, had become as dry as a brick-ground, with the vegetation utterly burnt up, there arose fevers to our troops, which, for malignity of type, could only be matched by those before mentioned on the Guadiana."

We do not think that the above fact disproves the existence of decayed vegetable remains acted on by humidity. We see that the malaria is always *after* the rainy season, and when the surface of the soil is acted on by a powerful

sun. We all know too, that, in the hottest season there is the most copious precipitation of dew at night, followed by its exhalation in the day. Who is prepared to say that these exhalations of humidity carry with them no noxious miasmata from decayed vegetable and animal remains? There is, we think, much more in favour of this opinion than against it.

During the years 1815-16 and 17, our author was employed in making a medico-topographical survey of the West India Islands—a service that afforded him diversified opportunities of improving the observations he had elsewhere made on the subject under disscussion. Dr. Ferguson very truly remarks that—

"It might *there* be seen, that the same rains which made a deep marshy country perfectly healthy, by deluging a dry well cleared one, where there was any considerable depth of soil, speedily converted it, under the drying process of a vertical sun, into a hot-bed of pestiferous miasmata." 8.

It has always been remarked that a morass or fen, when completely overflowed, becomes harmless, as exemplified in the case of the unwholesome town of Castries, at the bottom of the carenage, in the island of St. Lucia—a town embosomed in a deep mangrove fen. It became perfectly healthy under the periodical rains; while the garrison on the hill of Morne Fortunée, immediately above it, began to be affected with remittent fevers. The following passage is surely against Dr. Ferguson's doctrine.

"The top and shoulders of the hill had been cleared of wood

nary characteristic of our West India colonies. The swamp is too often exposed to the continued operation of a tropical sun, and its approach to dryness is the harbinger of disease and death to the inhabitants in its vicinity." 9.

Dr. Ferguson observes, what we have occasionally seen, that an offensive odour is by no means a certain indication of uniform insalubrity in a marsh. Thus the town of Point au Petre, in Guadaloupe, is situated among the most putrid marshes in the world, the stench of which is never absent from the streets,—yet the place was far from being *uniformly* unhealthy. Strangers, though much annoyed by the smell, often resorted to the place with impunity.

"But at Fort Fleur d'Epeé, the farthest outpost, at the extremity of the marshes, where they approach to the state of Terra Firma, where little or no water is to be seen on the surface, and no smell exists, there cannot be supposed a more deadly quarter, and all white troops considered their being sent there, as equivalent to a sentence of death." 10.

It has long been known that the *lower* apartments of a building, situated in a place capable of giving out these deleterious miasmata, were always more unhealthy than the *higher*. This will not hold good with respect to elevated grounds in the *vicinity* of a marsh. These elevations would appear to attract the deleterious principles floating in the atmosphere in the manner they attract the clouds and rains. Thus Port d'Espagne, Trinidad, is situated close to the great eastern marsh; and although not a healthy town, it is not uninhabitable. On the right are some heights which rise out of one extremity of the marsh. These are composed of pure limestone, and have proved a residence deadly and destructive in the highest degree. "No place, however elevated, or sunk, or walled in, or sheltered, gives security against the exhalations from below." It has been distinctly ascertained, indeed, that the degree of insalubrity is in proportion to the degree of elevation. The summit, 400 feet above the level of the marsh, is so deadly a spot, that not even a Creole Mulatto Spaniard could sleep in it with impunity, for a single night, after a course of dry weather.

Another curious example is given at the beautiful post of Prince Rupert's, Dominica, which is a peninsula comprehending two hills of romantic form, joined to the main land by a flat marshy isthmus to windward. The two hills, just out on the same line into the sea, the inner hill being a pyramid 400 feet high above and across the marsh—the outer hill forming a bluff promontory overhanging the sea. Be-

tween these is a narrow clean valley, which was pitched on for a garrison establishment, but found unhealthy. A barrack was then constructed on a natural recess or platform on the inner hill, 300 feet above the marsh; "but it proved to be pestiferous beyond belief—in fact, no white man could live there." A quarter was built on the *outer* hill, on nearly the same line of elevation, and exactly 500 yards farther from the swamp. This was found perfectly healthy.

This curious fact proves, we think, incontestably, that the swamp was the source of deleterious effluvium, and that the localities, terrestrial and atmospheric, determined the current of this noxious exhalation on the position taken up on the inner hill.

The following piece of medical topography will be read with much interest.

"In the Island of Antigua, the same results were confirmed in a very striking manner. The autumn of 1816 became very sickly, and yellow fever broke out in all its low marshy quarters, while the milder remittent pervaded the island generally. The British garrison of English Harbour soon felt the influence of that most unwholesome place. They were distributed on a range of fortified hills that surround the dock-yard. The principal of these, Monks Hill, at the bottom of the bay, rises perpendicular above the marshes to the height of 600 feet. The other garrisoned hill, which goes by the name of the Ridge, is about 100 feet lower, but instead of rising perpendicularly, it slopes backward from the swamps of English Harbour. It was the duty of the white troops, in both these forts, to take the guards and duties of the dock-yard among the

Another property of the marsh poison, is its attraction for, or adherence to, lofty umbrageous trees. In the territory of Guiana particularly, where these trees abound, "it is wonderful, says Dr. F. to see how near *to leeward* of the most pestiferous marshes, the settlers will venture with impunity to place their habitations, provided they have this security."

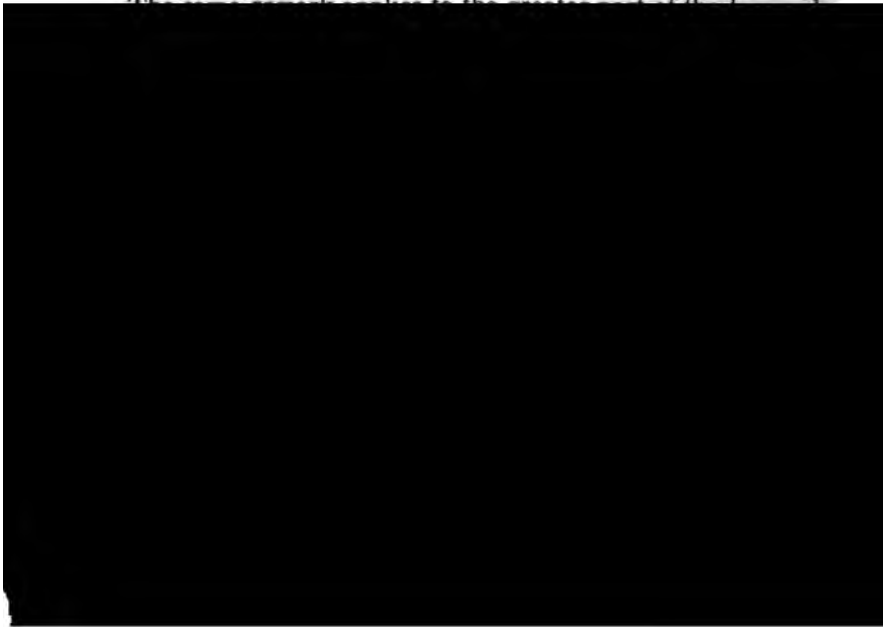
"The town of New Amsterdam in Berbice, is situated within short musket-shot to leeward of a most offensive swamp, in the direct tract of a strong trade-wind, that blows night and day, and pollutes even the sleeping apartments of the inhabitants with the stench of the marshes; yet it brings no fevers, though every one is well aware, that it would be almost certain death for an European to sleep, or even to remain after nightfall, under the shade of lofty trees that cover the marsh, at so short a distance. All, too, are equally aware, that to cut down the trees would be a most dangerous operation in itself, and would certainly be productive of pestilence to the town." 14.

From these and various other facts our author draws two principal conclusions. 1st. That the marsh poison has no connexion with *the putrefaction* of vegetable substances—a conclusion to which we cannot entirely subscribe, for the reasons before stated;—and 2dly, that the marsh poison cannot arise from simple humidity, in which we quite agree with our able and experienced author. We also agree with Dr. Ferguson, that the febrific effluvium has its principal source in the half-dried or drying margins or other points of swamps, and that complete inundation is generally a safeguard against the exhalation.

"One only condition then seems to be indispensable to the production of the marsh poison, on all surfaces capable of absorption; and that is, the *paucity* of water, where it has previously and recently *abounded*. To this there is no exception in climates of high temperature; and from thence we may justly infer, that the poison is produced at a highly advanced stage of the *drying* process;—but, in the present state of our knowledge, we can no more tell what that precise stage may be, or what that poison actually is, the developement of which must necessarily be ever varying, according to circumstances of temperature, moisture, elevation, perflation, aspect, texture, and depth of soil, than we can define and describe those vapours that generate typhus fevers, small pox, and other diseases. The marsh and the stagnant pool will no doubt be pointed out as the ostensible sources from which this poison has ever sprung; but the marsh, it has been seen, is never pestiferous when fully covered with water. At all other times it must present a great variety of drying surface, and both the lake and the marsh must ever possess their saturated, half-dried, and drying margins." 18.

Dr. Ferguson concludes this part of the subject with some remarks on other properties of marsh poison, besides those already noticed. He thinks there are no experiments yet made which determine whether the poison be specifically lighter or heavier than common air; but it evidently possesses much attraction for the earth's surface. The official accounts of the last sickly season at Barbadoes showed two-thirds more sickness on the ground floors than in the upper stories of the barracks.

Dr. F. thinks it a proof of the attraction above mentioned, that the malaria creeps along the ground, so as to concentrate and collect on the sides of the adjacent hills, rather than float directly upwards in the atmosphere. Another remarkable fact is, that it seems to be lost or absorbed by passing over a small surface of water. "The rarifying heat of the sun, too, certainly dispels it, and it is only during the cooler temperature of the night that it acquires body, concentration, and power." Currents of air also dissipate this poison; and our author thinks that the West India Islands would be uninhabitable, were it not for the trade winds. Where this salutary breeze is interrupted through circumstances of season, or intervention of high hills, the consequences are most fatal. The leeward shore of Guadaloupe, for a course of nearly 30 miles, under the shelter of a very high steep ridge of volcanic mountains, never felt the sea breeze, nor any but the night land-wind from the mountains; and though generally dry, and devoid of marshes, it is inconceivably pestiferous throughout the whole tract.*



"For wherever malaria prevails, the uncultivated savannah, even though used for pasture, becomes infinitely more pestiferous than the plantation, and the depopulated country falls completely under its dominion. With the aid of the purifying sea-breeze, this course at the British colony of Demarara, within six degrees of the equator, has succeeded in rendering the cultivated portion of the deepest and most extensive morass probably in the world, a healthy, fertile, and beautiful settlement." 22.

Dr. Ferguson thinks, and we agree with him, that the marsh poison has been falsely accused of producing other distempers, as dysentery for instance, because they happen to coexist with it. He thinks it produces but its own specific disease, varying, however, in form, from the common ague of Lincolnshire, through all the milder remittent types, up to the aggravated yellow fever, or malignant remittent of the West Indies—"and *that* variation so certain and uniform, in proportion to the remote exciting cause, that the varying types of fever might be measured almost to a certainty by the degrees of solar heat, as marked on the thermometer." Thus it is as rare to meet with ague on the swampy alluvial plains of the West Indies, as it is to find any thing else but a common remittent or intermittent on the cooler mountain marshy levels of the same country.

The professional world is aware how decidedly anti-contagious is Dr. Ferguson's creed. Although we are not inclined to go the lengths which our author goes, on this much litigated question, yet we deem it right to extract a note which he has appended to his interesting paper on marsh poison, as declaratory of his statement.

"The yellow fever cannot be a contagious disease, *because*, during its utmost rage, it is confined almost exclusively to a particular and very limited class of the inhabitants of the West Indies, viz. the newly arrived; and never affects the coloured people, unless it finds them under the same circumstances of being newly arrived from a cold climate; although *that last class* is the most numerous, by at least ten to one, of the inhabitants, and is besides the most liable, of all mankind, to fall under the influence of every acknowledged contagion, such as Typhus Fever, Plague, Small Pox, Measles, and Scarlatina.

"It cannot be a contagious disease, *because*, even among white people, it has been proven from official returns, that the attendants on the sick are less liable to be attacked with fever than those who have never approached the sick-bed, and because it has also been proven, in a multiplicity of instances, that the disease is not communicable to the wounded, the surgical sick, the convalescent, and the healthy, though occupying the most contiguous beds in the same hospital.

"It cannot be contagious, *because* it has also been frequently seen, that when a regiment has been divided into separate detachments, the different divisions have been affected with distinct types of fever, according to the circumstances of temperature and locality of their respective quarters; and when one of them happened to be stationed in the locality of yellow fever, (*which is always at or near the level of the sea,*) that form of fever was incapable of being conveyed to the other detachments in the higher ranges of country, however frequent and indispensable may have been the necessary communication between them.

"It cannot be contagious, nor any thing but a seasoning remittent fever, of violent and malignant form, peculiar in a great degree to the newly arrived, *because* all who have been debilitated by long residence in hot climates, and would therefore be the first to fall under the influence of a new plague, are in a great degree exempt from this form of the disease. And, lastly, it cannot be contagious, nor any thing but the product of unwholesome locality, and uncommon drought of season, *because*, in the warmer countries of Europe and North America, where all the inhabitants are under the same circumstances as the newly arrived in the West Indies, from the effect of the preceding winter, it has never been seen except in some particular low situations, where the heat has been steadily, for a considerable time previously, of the West India temperature; nor retained in them after that degree of heat has been changed by the change of season, nor transported from them, even during its utmost rage, to other localities in the closest vicinity, if of higher elevation, of better ventilation, and cooler atmosphere.

"The foregoing are not *vague assertions*, but matters of *fact*, that have been verified and recorded by the official returns of our armies in the West Indies for the last twenty-five years.

"As in every epidemic, where multitudes are in the course of

lodging-houses, to which alone they had access, it has been said, with much feasibility, to have been *imported* in ships. But this is another delusion, arising from the well-known fact, that newly arrived strangers are generally the immediate and most striking victims of every epidemic; and hence our most thoughtless intemperate sailors, when at these dangerous times they are thrown into the unwholesome anchorages of the West Indies, are not only the first to suffer from the epidemic in its course, or about to begin, but they are denounced as the *importers* by the prejudiced vulgar; and the accusation is loudly echoed, even among the better informed, by all who wish to make themselves believe, that pestilence cannot be a native product of their own habitations. The incomprehensible punctuality of ships regularly arriving at some particular sea-ports of Spain and North America, fraught with the pestilence of yellow fever, at the precise stage and period, *and at no other*, of those hot and dry seasons that assimilate them to the unwholesomest of the West India towns, can therefore be no more than a fiction of prejudice,—a delusion of panic terror." 29.

We consider the profession, and especially the tropical visiter, as under much obligation to Dr. Ferguson, for the valuable facts and observations contained in the foregoing paper, of which we have offered a more simple analysis than we otherwise should have done, had it been published in a form likely to travel widely through the profession.

IX.

1. *The Scourge of Venus and Mercury, represented in a Treatise of the Venereal Disease; giving a succinct Account of the Nature, Causes, Signs, Degrees, and Symptoms of that dreadful Distemper; and the fatal Consequences arising from Mercurial Cures, with the several Ways of taking that Infection; of the violent Gonorrhœa, the Caruncula or Excrescences in the Urinal Passage, the Phymosis and Paraphymosis, the Tumours of the Scrotum and Testicles, the Venereal Bubo, Warts, &c. With the other Symptoms, that are either antecedent, concomitant, or consequent, to the most inveterate Cases relating to that Distemper, such as Gleets, putrid Ulcers, &c. and their Cure, without one Grain of Mercury, in a plain and easy Method, founded upon unquestionable Experience of above Fifty Years. Unto which is added, the true Way of Curing, not only the consummate and inveterate, but also the mercurial Pox, found to be more dangerous than the Pox itself. The*

whole illustrated by many authentic and unquestionable Accounts of Cures performed, after the Patients were reduced to the very brink of the Grave, by mercurial Operations, the like not as yet extant. By J. SINTELAER, Practitioner in Physic. London, 1709.

II. *Observations on Syphilis, principally with Reference to the Use of Mercury in that Disease.* By JOHN BACOT, Member of the Royal College of Surgeons, and late Surgeon of the Grenadier Regiment of Guards. One vol. 8vo. pp. 115. London, 1821.

III. *An Inquiry into the Effects of Mercury on the Human Body, with a View to estimate its Value as a Remedy in several important Diseases.* By HENRY THOMSON, M. D. Licentiate of the Royal College of Physicians, Physician to the Dispensary for Diseases of the Skin, &c. &c. Manuscript, quarto, pp. 56.

IV. *A comprehensive Treatise upon the Symptoms, Consequences, Nature, and Treatment of Venereal or Syphilitic Diseases.* Translated from the *Seventh* French Edition of F. SWEDIAUR, M. D. Two volumes in one, 884 pages, 8vo. 1820.

V. *Engravings of Diseased Appearances, taken from Drawings, with the Symptoms, Progress, and Treatment of the Cases.* By JOHN HARRISON, Member of the Royal College of Surgeons, and Assistant Surgeon to the First or Grenadier Regiment of Foot Guards. Quarto, three plates, coloured, with descriptive letter-press. London, 1821.

IT is by no means improbable that in the course of a century hence, some *flash* publication of the present day may, after a profound dive in the ocean of oblivion, be dragged up by some curious critic, and, like "the scourge of Venus and Mercury," at the head of this article, be exhibited (no doubt to its astonishment) in company one hundred years younger than itself.* If Dr. Sintelaer were to rise from his grave, with the tremendous wig and cloak in which he is depicted in the book before us, he would probably be more surprised at the novelty of our *dandy* costume, than at that of our modern doctrines on syphilis. Yet we can-

* It was this book which first excited Dr. Thomson (of Edinburgh) to the investigations which have since made so much noise in the world.

not but think that both the dress and address of medical men of the present day are improved since the time of Sintelaer, who dates his book in the genuine style of those worthies who issue their proclamations from Stanhope Street, Charlotte Street, Nelson Square, the Egyptian Hall, and Bolton Row—namely—"from my house in High Holborn, the late dwelling-house of His Grace the Duke of Leeds, *over against Little Turnstile.*" It is not a little remarkable, too, that this "Scourge of Venus and Mercury" is printed by G. Harris—"next door to the *Bagnio* in St. James' Street," and is embellished with a large plate, entitled, "The Martyrdom of Mercury," representing men and women with demolished noses, rotten tibiæ, exfoliated skulls, empty alveolæ, panther-like skins, fallen palates, and other attributes which the moderns, as well as Dr. Sintelaer, have liberally bestowed on that vile poison—MERCURY.

Dr. Sintelaer moralizes in "good set terms" on the folly of mankind in treading the path of vice, and running after the forbidden fruits of Venus, when they see such vast multitudes of those miserable objects, "those spectacles of horror and amazement returning on the same road."

"But what seems to be more amazing still, is, that after these unfortunate creatures see themselves thus infected by the *poisonous fruits Venus* bestows upon those, that with an uncontrolled desire will intrude themselves into her labyrinths, they should have this additional misfortune, to be entangled also in the most deceitful snares of Mercury, whose lash being so severe, as not only to tear the flesh, but also to strike to the very bones, their case instead of becoming better, is thus rendered much worse, to the accomplishment of their destruction." *Pref.* 2.

It is almost unnecessary to state, that Dr. Sintelaer was induced to publish his work entirely "in consideration of the frailty of mankind and the misfortunes that attend him," the main design of it being "no other than to convince the world that the cure of the venereal disease by mercury is, at the best, very uncertain, and often subject to great hazards and ill consequences, always to no small difficulties;—and that there are actually, in *rerum natura*, such remedies and antidotes as will free us of this enemy of our constitution, without the least aid of mercury." Dr. Sintelaer being thus so generous to others, has a fair right to show a little kindness to himself. Accordingly he informs us that, without ostentation or vanity, he may safely affirm that his symptomatology, &c. of the disease is so exact and circumstantial, that nothing can possibly compare with it—

and therefore "it must needs meet with the approbation of the unbiassed and judicious reader."

There certainly is a great deal of curious matter in this same work of Dr. Sintelaer; but we can notice only a very few of his opinions or practices in this article. It appears that in his time the lytta was used internally for the prevention and cure of gonorrhœa, though our author does not seem to approve much of the medicine. In opposition to an anecdote related by a Dr. Greenfield, of a seaman who had kept himself free from gonorrhœa by tincture of cantharides, after having been dabbling in very troubled waters, Dr. Sintelaer asserts thus:—

I knew, some years ago, a young debauchee, who for twelve or eighteen months together and longer, made use by turns of all the whores he could pick up in the play-house, without receiving the least harm, but at last was most miserably peppered off by a substantial citizen's wife, when he least expected it." 31.

It is in the 4th, 5th, and 6th chapters of the second book that Sintelaer declaims on the poisonous effects of mercury, beginning with calomel. The only *fact*, however, which he brings forward against this luckless preparation is the following:—"Dr. Harvey tells us *a story* of an apothecary who gave three children a dose, each, of mercurius dulcis against the worms, and they all three died the same day." What the dose was, or how the mercurius dulcis was prepared, the deponent knoweth not.

On the other preparations of mercury many heavy curses

assertion may not be unworthy the consideration of a few of the present generation, who convert the exceptions into the general rules, and thus broach doctrines and propose practices which are wild and injurious. The following extract will show that Sintelaer anticipated all the modern writers on the mercurial disease.

"If you observe that after the cure of the pox by mercurial medicines, either some fresh pocky symptoms, such as did not appear before, but especially such as make their appearance in the glandulous and bony parts, as ulcers in the mouth and palate, or the roof of the mouth, and violent and continual pains in the bones; I say, if you find these symptoms appear after a cure of the pox by mercury, when nothing of it was observed before, or if you find these and other such like symptoms, which discovered themselves before the said cure become afterward more violent and frequent, you may then be fully convinced that they owe their origin chiefly to the malignity of the mercury, or at least with its intermixture with some slight remnants of the old pocky ferment; whence it is that we have given it the name of a mercurial or symptomatical pox." 221.

This explanation, Sintelaer observes—

"Leads us into the solution of a certain assertion maintained by several great physicians, both ancient and modern, viz. that the pox may lie lurking in our bodies for ten, twenty, nay thirty years;—which must be understood chiefly of the mercurial pox. For the mercurial poison will lie lurking for a long time in the body, till being separated and put in motion, it seizes upon the head and glandulous and bony parts, (unto which it is a constant enemy) and makes its appearance (after having lain dormant a great while) under such symptoms as have been mentioned before, which being the same that often attend an old pox, are consequently easily mistaken for that distemper." 222.

We have now adduced sufficient from Sintelaer to prove that there is little *new* in the present day, respecting the mercurial disease, and *pseudo-syphilis*.* The latter term is actually used by Sintelaer in the 2d chapter of the 3d book, which is headed—"Of the Mercurial or *Bastard-Pox*." We shall now proceed to the second new point, the *non-mercurial* treatment.

* Nearly 30 years before Sintelaer, viz. in 1683, Blegmy, a French writer, came to nearly the same conclusions as some of our modern practitioners, and adopted the same treatment that has been found successful by the army surgeons. He has one chapter "on the possibility of curing the venereal disease *without* mercury"—and particularly without salivation "flux de bouche." He speaks in so candid and rational a manner respecting the use and abuse of mercury, as to render his remarks peculiarly interesting at the present period.

As preliminaries, essential to the cure of syphilis without mercury, Sintelair enumerates different kinds of sweating. The first and most effectual, he observes, is by means of spirit of wine. And here Sintelaer anticipates Dr. Gower in this country, and an American practitioner, who is in a great rage with us for not attributing to him the original invention of this process. The following extract will set all claimants silent.

"In bed it is performed thus: the patient is laid quite naked in bed, and over his body are extended three or four half hoops, in order to keep the bed-clothes from touching his naked body; this done, you must place near the bed-side of the patient, a square tin box, with a small door on one side, and a tin pipe on the top, of such a length as to reach up to the bed-clothes, or rather to the heighth of the bedstead itself where the patient is laid. Things being thus prepared, you must put a small kettle or other vessel into the door of the before-said tin box, and put into it some spirit of wine, which being set on the fire, the vapour thereof will ascend through the pipe (one end of which is put under the bed-clothes) to the body of the patient, and make it sweat most plentifully in a little time, which you may continue as long as you see it convenient; you must take care not to put in too much brandy or spirit of wine at a time, which would burn too fast, but do it gradually, and as often as you find the brandy consumed, supply it with fresh." 231.*

In regard to the means of curing the disease, they are precisely those which the army officers have lately employed for curing syphilis without mercury, to wit, low living, confinement within doors, open bowels, and diluent drinks—

[redacted]

mercurial pox, as Sintelaer calls it, was treated in the same way. We shall introduce a single case, as a specimen of the many related by this anti-mercurial doctor.

"In July 1706, came to me the wife of a certain tent-maker, who having contracted the venereal disease gave me the following account of her present and past condition; she had, she said, as she believed, taken the advice of no less than forty practitioners, by some of whom she had been salivated all manner of ways, viz. by mercurial unctions almost all over her body, by excessive suffumigations, as likewise by Bolus's pills, powder, &c. and after having endured all these torments, miseries, and dangers, she was sent away with a pass for an incurable, and well she might be so, after so many violent and reiterated mercurial salivations, which had rendered the consequences much worse by this time than the disease itself was before.

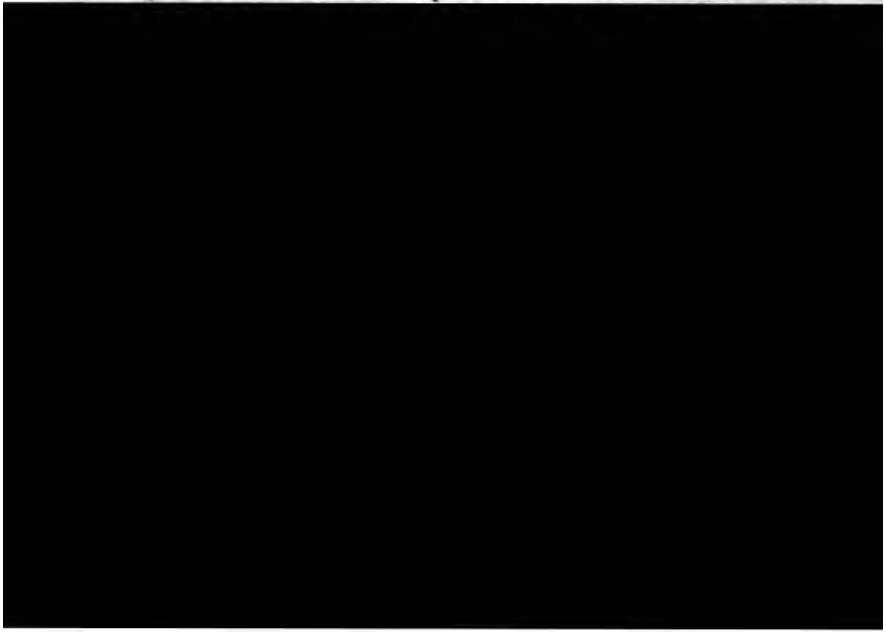
"Some, it seems, among her doctors were so ingenuous and honest, as not to take any of her money; but others, who pretended to a more than ordinary skill and method in the cure of this distemper, had the good conscience to get out of her all they could, though their motto was, *no cure no money*, but their real design tended actually to nothing else, but, *all money all mercury*, as this poor creature had been sufficiently convinced to her cost.

"But, after all, she would perhaps have thought herself tolerably happy, had she not been reduced to such a condition by the mismanagement of some of her doctors as to be dismissed as incurable; her symptoms occasioned by the mercurial pox being such as made not only herself, but also some able practitioners to despair of a cure.

"For when she came to my house, her legs and arms were not only exceeding painful, and the bones thereof covered with hard nodes, but her head also, her throat, shoulders, and back full of deep and most putrid corroding ulcers; to add to her misery, she was already gone five months with child, which made her dread (as she had all the reason in the world to do) that the poor infant would partake, when born, of the miseries of its mother. In this distressed condition she had recourse to me for help, which I willingly afforded her; we began the cure after my usual method, with a specific purging powder, and after having ordered her such a diet as I thought most suitable to her present disposition, she began to drink of the anti-venereal decoction, according to my direction, for thirty days successively, which had this good effect, that within the before-mentioned time all her ulcers healed up, without the use of any other remedies than the before-mentioned diet-drink, her nodes on the arms and legs disappeared, and she was not only restored to perfect health, but also in due time, brought to bed of as lusty and well-look'd a child as could well be seen, without the least signs or appearance of any venereal symptoms or infection; and both the mother and the young infant continue ever since (as far as ever I could learn) in a perfect state of health." 305.

In concluding our notice of this book, we are, in the first

place, under the necessity of pronouncing its author to be a QUACK. After all that is said about the amazing success of the *anti-venereal decoction*, the knave acknowledges that one of its component parts he must keep secret—and why? because, forsooth, if he divulged it, it would tend to his own detriment—"and to the no small encouragement of a sin, which is only too natural and too common already!" But while Sintelaer must be classed among Charlatans, it is evident that the modern doctrines respecting syphilis, pseudo-syphilis, and the non-mercurial treatment are but amplifications of what he had written more than a century ago. At the same time, it is abundantly evident that the mode of employing mercury at that time, by profuse and reiterated salivations, was the grand reason why so many injurious consequences resulted, and why other means were eagerly sought after for eradicating the disease. When mild and alterative courses of mercury were afterward found so universally efficacious, and so seldom productive of mischief to the constitution, the medicine regained its claim as a specific, and the belief was gradually established that the disease could not be eradicated from the system without the mineral. How John Hunter, and the greater number of the profession, came to lay it down as a maxim, that chancres and other symptoms of syphilis went on increasing till the specific was applied, it is difficult to say, unless the disease has lately undergone some modification in its nature.* This maxim is now unquestionably proved to be erroneous; but we imagine that the superiority of the mild mercurial course, (where scrofula or other peculiarities of constitution do not



view, as they will render the practitioner less anxious to commence or push a mercurial course, where there is doubt respecting the true nature of the disease, or the ability of the patient's constitution to bear the remedy without injury. This appears, in a great measure, to be the opinion of the author, whose work is second on the list.

Mr. Bacot has had considerable experience in the treatment of Syphilitic complaints, and has issued his little work into the world with much modesty, and chiefly with the view of guiding his junior brethren in the use of mercury;

"By collecting and stating the evidence upon this subject; by drawing those conclusions which seem to be fairly deducible from the experiments that have of late excited so much interest in the medical world; and by endeavouring to restore mercury to that degree of confidence to which it seems fairly entitled, ascribing to it, at the same time, those just limits beyond which that confidence would be productive of mischief." 3.

Mr. Bacot introduces a neat sketch of the various modes of treating syphilis from the earliest records of its appearance in Europe. In this sketch we can notice but a very few passages. He remarks (p. 12) that Wiseman was in the constant habit of bleeding his patients previous to putting them on a mercurial course; and he thinks the practice might be revived, in many instances, with much advantage. He quotes the passage from Dr. Paris's pharmacologia, which we have extracted at page 85 of the first volume of this series, relative to the increased susceptibility of the system to mercury, after bleeding.

"Without any reference to the after exhibition of mercury, it not unfrequently happens that a large and sloughy sore, attended with a high state of inflammation and acute pain, is rendered mild and tractable by a copious bleeding; it has often occurred to me, to see this effect produced by a spontaneous bleeding from the rupture of some vessel of the part: and this remark equally applies to some ulcers of the tonsils as well as to the same condition of buboes." 13.

This we have witnessed ourselves; but we have generally trusted to low living, confinement, warm clothing, and plenty of thin water gruel going to bed, for accelerating the mercurial impregnation, and shortening the period of cure. In respect to the late investigations and non-mercurial treatment, our author sums up his conclusions in the following candid manner.

"1. It is assumed, therefore, as an established fact, that all ulcers upon the parts of generation are curable without the use of mercury; but I cannot concede that, generally speaking, they are cured with

equal celerity: they require more strict confinement, more attention to the state of the general health and to regimen, than is found necessary, under a mercurial treatment carefully conducted; and, in some instances, the length of time requisite for their complete cicatrization is alone a serious evil. It may be also added, that under the non-mercurial mode of cure they frequently heal with hardened and elevated cicatrices.

"2. It must be admitted, that a great proportion of cases so treated are followed by a train of constitutional symptoms, which succeed to the cure of the primary sores in a period varying from six weeks to three or four months; and though medical men differ greatly as to the proportion of these cases, the causes of which difference it would not be difficult to explain, perhaps, if we take it at an eighth of the whole number, our estimate will not be far from the truth. The appearances thus produced are various; I might say, almost infinite, in degree at least. Some of these will be mentioned more particularly hereafter; but they have been confined, as far as my knowledge and experience go, to ulcerations of the tonsils, pains in the limbs, swellings of the joints, particularly the ancles and elbows, eruptions and ulcerations of various kinds upon the body, limbs, and in the hairy scalp, ophthalmia, great debility, and wasting of the flesh, occasional deafness, and, not unfrequently, pulmonary complaints. This latter circumstance has been adverted to by Mr. Rose; and, in adding my testimony to his, I am prepared to go somewhat farther, by expressing my belief that the debility and cachexy of habit produced by these constitutional symptoms, too often render the system prone to the attack of that formidable disease, the pulmonary consumption. Two or three such cases have fallen within my observation; and the subject is too important to permit me to pass it over without calling the attention of the profession particularly to it. In this mode a consumption may be established, in a habit

course of time, as no longer to present the same phenomena as formerly. Mr. B. inclines to the *first* supposition. We confess that we are much more inclined to the *second*, since we imagine we perceive a considerable difference in the appearance and course of the disease at the present time, compared with what we remember of it thirty years ago. This idea of a modification, we think, is greatly strengthened by a circumstance stated by Mr. Bacot himself—namely, that no mention is made of bubo before the year 1540, though it is now one of the most common attendants on the primary symptoms. Leaving this discussion, however, and returning to practical points, we agree with Mr. Bacot in the following judicious counsel.

"Viewing the serious train of evils to which the non-mercurial practice tends, I would advocate the moderate and gentle use of mercury in all those cases of primary sore, where a mild mode of local and general treatment is productive of no beneficial change in the course of a reasonable period; at the same time being perfectly prepared to do without it in all those cases, and in those constitutions where its employment appears to be pernicious, knowing that I can dispense with its use without the dread of any of those more formidable consequences which formerly rendered the surgeon often a slave to the prejudices and fears of his patient or to his own; and being convinced that it is both much wiser and more safe to postpone its exhibition than to persist in its administration where the habit is irritable, and it appears to operate upon the system as a mineral poison only, calling into action that peculiar and anomalous class of symptoms usually called cachexia syphiloidea." 35.

Of the nature of the syphilitic virus we know nothing—of the modus operandi of mercury, little. Our author justly considers the cure of a chancre as incomplete, while any elevation or marked hardness about the cicatrix remains—consequently the remedy should be continued till this appearance is removed.

In respect to the best mode of administering the mercury, Mr. Bacot prefers the blue pill to all other preparations, combined with such a proportion of opium as will prevent its running off by the bowels. The mercurial inunction, he thinks, has no peculiar advantage, except where the irritability of the stomach is troublesome, or there is a wish to affect the system rapidly. "It then forms an admirable help to, or substitute for, the blue pill." Mr. Bacot concludes this introductory part of the work with judicious observations on the management of the patient during a mercurial course.

I. *Gonorrhœa.* Mr. Bacot believes that gonorrhœa is

sometimes succeeded by constitutional symptoms; "but the proportion of these cases is very small, their character is peculiar, neither do they require mercury for their removal;—indeed it appears to be clearly contra-indicated." These constitutional symptoms, as Mr. Carmichael and others have shown, are generally ushered in by pyrexia, the joints, especially the ancles, becoming swelled, red, and painful, with a minute papulous eruption about the shoulders, arms, and back. The febrile symptoms are transient, and the whole usually give way to purgatives, antimonials, the warm bath, and confinement to bed.

2. *Chancre.* After all the labours of experienced and enlightened practitioners, the subject of primary sores on the genital organs has not been yet reduced to system. Mr. Carmichael indeed is of opinion, that one particular species of sore *only* is capable of producing the true secondary symptoms of lues. Mr. Bacot's experience will not permit him either to subscribe to this conclusion or adopt any specific classification of his own—at least he is quite sure "that many varieties of sore, independently of the sloughy chancre mentioned by Mr. Carmichael, lead to constitutional symptoms, differing in no respect from those he has described, and admitting of the same mode of cure."

Perhaps the earliest appearance of chancre is pustular, but, in a majority of cases, when they are presented to the surgeon, they have passed this stage, and exhibit ulcerating or sloughing surfaces varying in kind and degree almost *ad infinitum*. Even Mr. Hunter, as our author observes,

be unnecessary or improper; and, finally, enumerates a few distinct characters of ulceration, together with their consequences and treatment.

1. The first sore which he mentions is one described by Mr. Pearson, when speaking of cinchona in the treatment of lues:

"It is characterized by a great derangement of the general health, by a high state of inflammation of the part, by great local pain, and proceeds rapidly to the destruction of the parts. The situation of this sore is most commonly in the angle between the prepuce and glans penis; and those of a full habit of body, the young and the vigorous, are most liable to its attack. The most prompt and vigorous anti-phlogistic means are necessary to arrest the progress of this sore; and the blood taken away in these cases presents the usual inflammatory appearances, frequently in a very high degree. The exhibition of mercury, in this species of sore, is highly mischievous, and productive of the worst consequences; nor does it often happen, that secondary symptoms succeed in these instances. The destruction of the parts is so rapid, that the agency of the poison seems to be destroyed; and, as Mr. Pearson has remarked, mercury is perhaps not requisite for the after security of the constitution." 58.

The above observations apply only to the most aggravated forms. This sore is sometimes met with less violent in degree, and less rapid in its course. Here constitutional symptoms occasionally show themselvest in the shortest possible period, and are distinctly formed before either the system or the ulcer is reduced to a sufficiently quiescent state for the safe administration of the remedy, which, however, must be resorted to as soon as the condition of the ulcer will admit. These latter cases are of rare occurrence compared with the violent form before described. Two illustrative and interesting cases are detailed by Mr. B. in this place, which we recommend to the reader's attention.

2. Another ulcer of frequent occurrence is sometimes situated on the internal prepuce, sometimes on the glans.

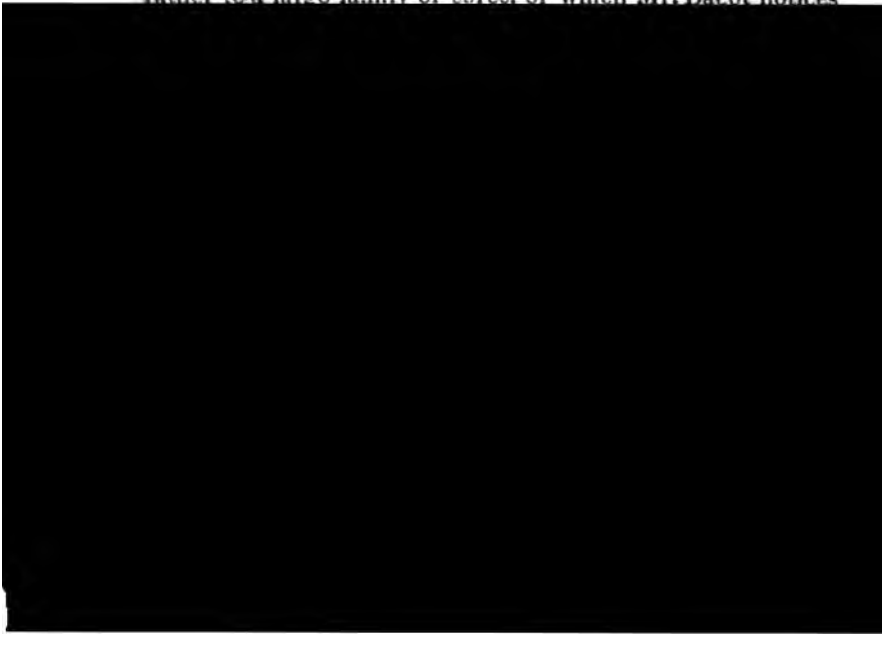
"In both cases, the hardness surrounding the sore is very considerable; but, in the former situation, this hardness is very peculiarly marked: the surface of the sore is generally covered with a dark, liver-coloured slough, which falls off, and is succeeded rapidly by other sloughs, destroying the parts rather in depth than in breadth. The discharge from this sore is a thin, dark-coloured ichor; it is not attended with much pain, and is very much under the influence of mercury. The external application of this remedy, in the form of the black wash, is generally productive of very marked benefit." 68.

Although Mr. Bacot advocates the use of mercury in this particular sore, until the hardness of the surrounding parts

is removed ; still he is not certain that its most careful administration will secure the constitution against the attack of secondary symptoms. Notwithstanding the most carefully conducted mercurial course, our author has seen an eruption of copper-coloured spots, and an enlargement and excavated ulcer of the tonsils, and swellings of the elbow and ankle joints, succeed to the cure of this ulcer, in a period of from two to three months. " These symptoms are as much under the influence of mercury as the primary sore; they are neither tedious nor difficult to remove, and the flesh and strength are recruited as rapidly under the use of the remedy, as they had before rapidly declined." A case in illustration is given.

3. A third variety of sore, often met with and easily recognised, usually attacks the external prepuce or body of the penis, and generally appears to us, at first, as a dark coloured scab, spreading irregularly, and, on the crust falling off, leaving a surface rather elevated above the surrounding parts. The granulations are large, loose, and flabby ; the edges hard, and of a deep red colour. " This sore calls for the exhibition of mercury, which materially facilitates the progress of healing." " When this remedy is omitted, constitutional symptoms succeed in a very large proportion ; and I firmly believe, that the judicious use of mercury will most commonly prevent such an occurrence." In this ulcer there is such a tendency to the production of unhealthy granulations that escharotics are almost daily necessary.

4. What Mr. Howard calls the *aphthous* chancre belongs rather to a large family of sores, of which Mr. Bacot notices



and defy even the pencil of the artist." The judgment and penetration of the practitioner must, of course, be his guide through this labyrinth.

With the following sentiments of our author we entirely agree, being the practice which we have pursued, and the doctrine which we have preached, for very many years in this disease.

"The exhibition of mercury in the majority of primary sores, with the exceptions and restrictions I have mentioned, is, however, so safe and so generally beneficial, that where an ulcer continues for a certain time to pursue its course, and to resist all those mild methods of cure, both external and internal, which influence the progress of sores in other parts, I should not hesitate to have recourse to its exhibition: my object would be its mild, but gradual accumulation, not placing my patient, unless local circumstances rendered it necessary, under total confinement, and taking particular care that the affection of the gums does not advance too rapidly, or proceed to such an extent as to compel me to omit the remedy until I am satisfied that the cure has been effected. My endeavours would be directed to keep up a continued and unbroken action of the specific during the whole period, being convinced that the interrupted and careless use of the mineral too frequently leads to the establishment of anomalous symptoms, perplexing to the surgeon, and ruinous to the general health of the patient. I have said little of the local treatment of those sores in which the exhibition of mercury is determined upon, my intention not being to write a treatise on the disease; I shall, therefore, only observe, that they should be as little interfered with as possible, in order that the action of the remedy may be apparent upon them; the use of stimulant and escharotic applications being had recourse to when the state of the ulcer demands their employment." 70.

On the subject of buboes, Mr. Bacot makes many very judicious remarks and observations, for which we must refer to the volume itself.

5. *Constitutional Symptoms.* The endless combination of these, which every man of experience must have seen, renders it exceedingly difficult to do justice to the subject in a limited space. We can confirm the truth of the following sentiments.

"I would, however, premise one observation, which is this: that it is my firm conviction, that an attentive consideration of those cases of primary sore that come under our care, and a judicious, temperate, and cautious employment of mercury, will greatly narrow the circle of the constitutional symptoms, and render them of comparatively rare occurrence. In this opinion, I most heartily concur with Mr. Guthrie; but I must at the same time express my belief,

that, although constitutional symptoms did not so often present themselves before the non-mercurial practice became general, when they did occur, they were much more serious; because they were generally the result either of too profuse an exhibition of mercury, or of its improper action upon a constitution ill-disposed to receive it." P. 64.

The eruptive diseases attendant on syphilis, though almost infinite in number and occasional combination with other symptoms, may yet, Mr. B. thinks, be usefully classed under four distinct characters, viz. the papular, tubercular, copper-coloured, and pustular eruptions. These four families admit of subdivisions to an endless extent. Among the most common constitutional affections, the enlargement and ulceration of the tonsils must be numbered. A very frequent concomitant on syphilitic eruptions is a swelling of the joints —particularly the elbow and ankle joints, accompanied by severe nocturnal pain, and often external redness, much resembling rheumatism. Nocturnal pains in the head and limbs, though sometimes met with alone, are much more frequently precursors of eruptions. Between venereal ophthalmia and iritis it is not always easy to discriminate. During the existence of the above and various other constitutional symptoms, there is considerable debility, and wasting of the flesh. As for ozœna, node, rhagades, feci, condylomata, alopœcia, and several other formidable symptoms, our author is not acquainted with them "as the regular and natural consequences of syphilis." He will not assert that these diseases do not occasionally occur as consequences; but instead of considering them as the general rule, he is

of lichen is generally preceded by pains in the limbs, exacerbated by night, and not unfrequently there is pyrexia. In the *latter* case, Mr. Bacot thinks the complaint is not syphilitic, and he would be very unwilling to use mercury until the general health was amended.

"When the papular eruption makes its appearance from three to four months after the healing of a primary sore, and the flesh and strength have visibly and gradually declined, without any apparent derangement of the general health, there can be no doubt as to the propriety of using mercury; and it is astonishing how small a quantity will, in some instances, produce a most striking effect. With respect to the continuance of the course, the disappearance of the symptoms would be my principal guide; and it does not appear to me to be at all necessary to keep up the action of the remedy after this purpose has been fairly and entirely accomplished, nor can any stated time be fixed with precision for its discontinuance." 96.

7. Among the more remarkable varieties of the *tubercular* eruptions, is the small tubercle, which generally breaks out on the eye-brows, forehead, arms, or hairy scalp. It is early in its appearance. The crusts are irregular upon the surface, and leave ragged, unhealthy-looking ulcers when they fall off, which heal, however, without much difficulty. This cutaneous affection is often formed before the primary sore is healed; and it generally follows a small and superficial ulcer situated within the prepuce.

"The larger tubercle, usually denominated rupia, consists of a high and elevated scale; so peculiar that when once seen it can never be mistaken. The scab is generally large, and is most frequently met with on the arms, back, and head; the crust falling off leaves an ulcer with a glassy, shining, level surface; the granulations from which are unhealthy and loose: the health suffers considerably in general previous to the appearance of this symptom, and it is not unfrequently accompanied with an enlargement, and a ragged and superficial ulceration of the tonsils. I cannot trace this form of eruption to any particular character of primary sore, but it is one of the earliest forms of secondary symptom; and, notwithstanding what has been said to the contrary, I believe it to be strikingly benefited by the mild employment of mercury: the corrosive sublimate properly diluted, and applied in the form of a wash, exercises a powerful effect upon these ulcers." 98.

Mr. Harrison, in his second plate and fourth case, gives a good description of this tubercular eruption. The subject was a young man, 22 years of age, of vigorous constitution, admitted into hospital, in June, 1819, the primary sore commencing as a pimple, which, in a fortnight, spread rapidly, in four or five days more acquiring a large size, and exhibit-

ing a foul, sloughing and irritable state, attended with large and frequent pulse, pain in the head, foul tongue, &c. He was bled largely, and had cooling aperient medicines, poultices and fomentations being applied to the sore, and leeches to the bubo. In the course of a few days the sore assumed a healthy appearance, and healed within the third week. The bubo suppurated, burst, and closed without ulceration in six weeks. During the last fortnight, he took decoction of bark, but no mercury. He was discharged apparently in good health. Two months after his discharge, however, he returned to hospital, with a tubercular eruption (excellently represented in the plate, which we recommend to the profession) having a gentle and uniform elevation of the skin, of a crimson colour, feeling hard but not painful. When thrown off they exhibited foul ulcers. With these symtoms there were pains in the joints, and sore throat without ulceration. This patient was subjected to a course of mercury, which appeared to do good at first, but afterward disagreed. It was then left off, and sarsaparilla employed, under the use of which the sores healed, and the health and strength were soon regained.

Of the pustular eruptions Mr. Bacot has little experience; but he is induced to think they are not really syphilitic.

"Blotches," says Mr. Bacot, "and spots of a copper-colour, some of which are covered with a light bran-like scurf, are to be seen in every variety of form and degree, either alone or in combination with sore throat and swellings of the joints: here, as in the former cases, I am inclined to make a great distinction, when I find the general health much deranged, the tongue loaded and furred,

"In combination with mercury many medicines may be usefully joined; and of these I think it difficult to speak too highly in praise of sarsaparilla; like mercury, it has had a variety of fortune; at one time it has been exalted and praised with a degree of hyperbole; at another period, it had lost its credit with the profession entirely; at present, its virtues appear to be more rationally estimated, and, when genuine, (for its adulteration is both frequent and of difficult detection,) it exerts a very beneficial influence in many anomalous cases, where mercury alone appears to disagree; and in conjunction with small doses of that mineral the effect appears to be more decisive than could be produced by the employment of either medicine singly." 103.

Mr. Bacot's little work concludes with some judicious observations on sore throat and ophthalmia, which deserve the attention of the practitioner in particular. Mr. B. notices a large ulcer of the tonsils, with ragged and unequal edges, surrounded by a deep coloured inflammation, extending over the velum pendulum and uvula, preceded and accompanied by much febrile action and uneasiness in swallowing, when *hot substances* are taken into the throat. Brisk purgatives, free blood-letting, and cooling diet soon induce a rapid change in this state of things. The large excavated ulcer of the tonsils, however, attended by cutaneous eruption, void of pain, and not surrounded by inflammation, though it may be kept in check by sarsaparilla, the mineral acids, &c. is quickly and permanently cured by mercury. "If it be thought desirable to put an immediate stop to the progress of the ulceration, the corrosive sublimate, in the form of a gargle, is a most efficacious and powerful remedy."

Ophthalmia, a secondary affection, is rarely met with as a solitary symptom. It is often attendant on the eruption of simple lichen, and imperatively demands the early use of mercury, in addition to the common means employed for the reduction of ophthalmic inflammation. Near the conclusion of the work Mr. Bacot observes, that, although he has not enjoined total confinement during the administration of mercury, yet, upon the whole, in this variable climate, seclusion is desirable, "because the legitimate effect of the specific upon the habit requires to be watched with great care, and the case is likely to become complicated and to embarrass the practitioner, where cold is taken, or any other diseased action arises while the system is under the influence of mercury." We cannot, indeed, too strongly impress on the minds of young surgeons the necessity of confining their patients, if possible, during the administration of mercury. We have so often seen the good effects

of attending to this rule, and the miserable consequences of neglecting it, that we cannot avoid taking all opportunities of holding up the good and evil to view, as an inducement to the one, and a warning against the other.

We must conclude our analytical notices of Mr. Bacot's little work, by recommending it to the surgeon, and especially to the young surgeon, as containing judicious advice and safe rules of conduct, where the practice is unsettled, and the indications doubtful.

The manuscript work, forming the third article at the head of our list, is a very erudite research into the origin of syphilis, and an elaborate disquisition on the use and abuse of mercury, not only in venereal, but in many other diseases. We are sorry that the nature of the investigation and the narrow limits of a review preclude all hope of giving any thing like a satisfactory analysis of the production in question—and we regret this the more, as we believe Dr. Thomson has no intention of committing the manuscript to the press.

The investigation into the origin of syphilitic diseases forms the concluding part of Dr. T.'s MS. though we think it should have been placed in front, and on that account shall commence with it here.

Our author's creed is *non-importation*. The controversies, he thinks, which have arisen respecting the origin of syphilis, may be traced to the intimate connexion it has with moral character. One nation has been anxious to throw off the odium on another—generally on its political

as completely fabulous; and therefore we agree with Dr. Thomson's sentiments, as shown in the following extract:

"Indeed the whole of the received account is extremely improbable, that *sailors*, after a long and successful voyage, landing on the northern coast of Spain, objects of curiosity, ready to embark again to reap the fruits of their discoveries, and the wealth the new countries were supposed to abound with, should have been sent off to act as *soldiers* at the siege of Naples, labouring under a new and horrid disease which must have been of some months' duration, and have incapacitated them from every kind of exertion; but that neither Columbus himself nor his brother, who left such accurate narratives of his voyage from his MSS. should not make the least mention of such disease being discovered among the natives, or prevailing among the crews of their vessels, is certainly still more difficult to be reconciled with reason, and afford strong presumption of error." P. 42.

One thing is certain, that whether of foreign or indigenous origin, the disease is not now what it was—and in all probability varied in every age and country. It had changed in Boerhaave's time, as the following extract will show. He says—

"*Primo* incipit a pustulis *genere diversis* in genitalibus, licet interdum, sed raro, in capite. *Secundo*, pustulis varis similibus, hinc Spansche Pokken. *Tertio*, aliæ planæ, minimæque extantes, *hæ* non sunt nostris temporibus. Aliæ colore subalbido, e quibus squammæ resolvebantur, et caro sub his cancrosa apparebat. Hæ sunt quæ hunc morbum ab aliis distinguunt." *Boerhaave.*

That erroneous ideas might have prevailed in former times is not to be wondered at, when we see that in our own time John Hunter, and thousands after him, gave mercury in every case of chancre, on the assumption that without it the sore would pursue a destructive and progressive course. We need not say that this notion is proved to be utterly void of foundation in fact.

It appears that Gabriel Fallopius, who read lectures on the "*Morbus Gallicus*," sixty years after its supposed importation, is the first who mentions its foreign origin; for Nicholas Massa, who preceded him, and to whose writings Fallopius added very little, did not suspect it. Boerhaave, who is said to have "examined systems by experiments, and formed experiments into systems," acknowledges that Massa wrote thirty years after the appearance of this disease, with so much candour as to bear the palm from all who went before him; yet Massa's account of the disease, as given by Boerhaave, will not apply at all to the disease as it now exists, or indeed as it existed in Boerhaave's own time. It is extremely probable indeed that, as the disease

became older, it spent its force, for Astruc, Fracastorius, and others, observed that its symptoms were milder in their days.

But while the foreign origin of syphilis was doubted, even in the earliest periods of its history, all seem agreed that a new and terrible disease broke out about the dispersion of the army besieging Naples. And as a state of doubt is painful to the human mind, the explanation offered of a foreign origin was well calculated to satisfy the prejudices of European nations, while it served the physicians with an apology for their want of success in curing the disease. We cannot wonder at the rapid manner in which the disease spread, however first engendered, nor at the alarm excited in the mind of Governments and people, when we reflect that it was communicated by lying in the same bed, by the clothes, gloves, or money of the patient. The breath was also thought to be infectious, and we find Cardinal Wolsey indicted for whispering in the king's ear, while supposed to be labouring under the venereal disease. Who could suppose them speaking of syphilis as now seen among us? Dr. Thomson thinks that the circumstances attending the army of Charles VIII. were very favourable to the production of the disease; the said army having lain long before Naples, in want of provisions, and in a state well calculated for the generation of infection.

Our author thinks that evidences of the existence of syphilitic complaints may be found in the writings of the ancients, and the records of the Chinese, though these diseases, from certain combinations of causes, have been more

smallpox, which prevailed in his time, and many have thought it described by Hippocrates. Such has been the confusion on these subjects. 53.

We have another striking instance of inconsistency, error, and contradiction in the subject of gonorrhœa, which is said not to have been known in Europe till fifty years after the discovery of America, in contradiction to positive facts showing its existence long before, as the laws respecting stews, and the "perilous disease of brenning," fully testify. But we must leave the origin of syphilis as we found it—

"For shadows, clouds, and darkness rest upon it."

We come now to the subject of mercury as a remedy in syphilis and many other disorders. Dr. Thomson has had ample experience of this medicine, so much lauded and condemned by different writers, in various climates, and on various subjects, and so far his testimony is entitled to much respect.

Dr. Thomson cannot ascribe to mercury any thing like a *specific* character, in the cure of syphilis or any other disease; but acknowledges that it is the best remedy hitherto discovered for syphilis, when judiciously administered, and provided there is no ideosyncrasy of constitution to contra-indicate its employment. This is the pith of Dr. Thomson's argument, but he brings forward a great deal of curious and important matter in proof or illustration; of which, however, our narrowing limits will permit us to make very little use. We have shown, in many parts of this article, that the opinion is not new, respecting the effects of mercury in sometimes aggravating instead of curing venereal diseases. Boerhaave himself, speaking of this "horrenda labes," says it was "nunquam autem magis noxia quam si *mercurio* infecti hominis humores virulentos dissoluti sint."

"Many revolutions," says Dr. T. "have taken place in the use of mercury during the last three centuries, owing to the rashness of some and the timidity of others; and it is curious to observe, in the perusal of the older authors, how the great rival nations have alternately rejected and had recourse to mercury. When decried in England, it has been extolled in France; and when it lost its credit in France, it was again resorted to in England. These changes have taken place several times, and indeed the methods of cure adopted in the two countries at the present hour are an illustration of the fact; for while *we* are endeavouring to prove the inutility, if not indeed the danger of mercurial remedies, it comes within my own knowledge, in some of the first public establishments in France, that one preparation alone, and that the most powerful, is relied on almost universally for the cure of venereal disorders." 4.

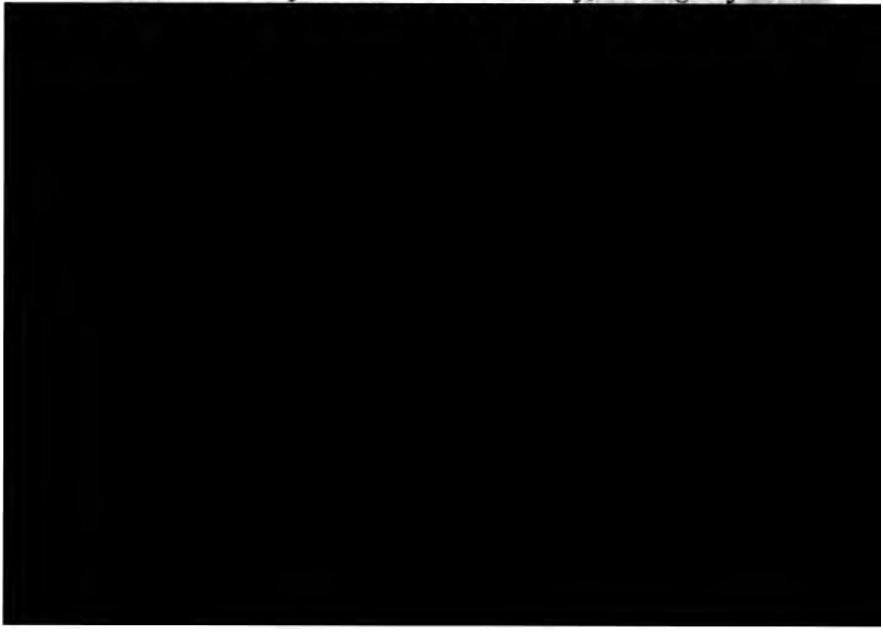
Hunter himself, who says that nothing can show the unsettled and ungrateful mind of man more than his treatment of this remedy, acknowledges that it often produced *nodes* which he considered of a scrofulous nature, and pains resembling those of rheumatism. In short, there can be no doubt that the symptoms caused by mercury were too often confounded with those of the disease for which it was administered, and thus very dreadful effects produced by the error. We cannot therefore be surprised at the frequent passages in the old authors, proving that they often regarded the remedy as worse than the disease.

> " Graviora morbis patimur remedia,
> " Nec tanta vita est vivere, ut possis mori :"
>
> " Irrita letiferos auxit medicina dolores
> " Crevit et humana morbus, ab arte meus ;"

are specimens of the exclamations and epitaphs of sufferers from mercury.

Dr. Thomson very properly censures John Hunter for asserting that the cure of syphilitic affections would go on equally well whether the patient drank a bottle of wine daily, or kept to barley water. We have seen this plan pursued, and Hunter's authority quoted, but the cure was never so certain, speedy, or easy, as where abstinence and confinement were enjoined. Dr. Thomson's sentiments respecting mercury in syphilis may be gathered from the following extract.

" For my own part, I will neither add to the eulogiums which have so lavishly been bestowed on mercury, nor range myself with



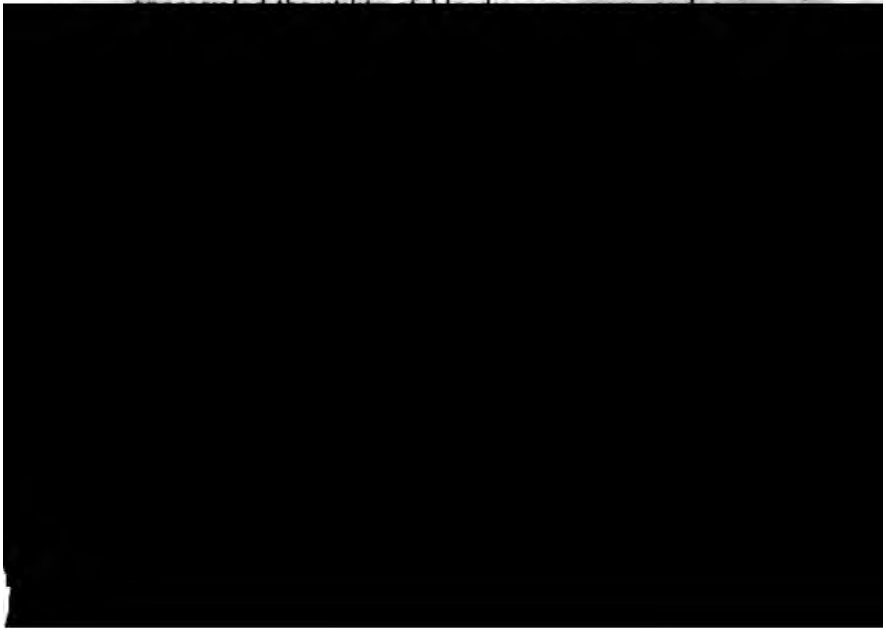
fallacy abounds, we should follow the advice of Lord Bolingbroke—"by reasoning cautiously, pronouncing modestly, practising sincerely, and hoping humbly." That observation of Boerhaave, who acknowledged that he knew of no remedy but what became so by its proper use—"nullum se cognovisse remedium quin solo tempestivo usu tale fieret," is peculiarly applicable to the exhibition of mercury. In the hands of a judicious practitioner it will fulfil a very considerable number of different, and apparently contrary indications—in the hands of ignorance, temerity, or indiscrimination, it will often do more harm than good. But while, with Dr. Thomson, we believe that a carefully conducted mercurial course is the surest and quickest cure of syphilis, we heartily join with our author in expressing our unlimited admiration of those who have, by cautious and ample experience, proved the power of Nature over the venereal virus, when assisted by rest, low diet, and antimonials. The army medical officers are, on this account, entitled to the gratitude of the profession, for having let in a flood of light upon the nature of syphilitic diseases.

In tracing the pernicious effects of mercury on the human constitution, when taken in excess, Dr. Thomson alludes to the circumstance of men escaping with *whole bones*, who have taken great quantities of mercury in tropical or other climates for acute or chronic diseases; and here. we must say, that Dr. Thomson makes use of very lame arguments, and defective reasonings. Dr. T. has served in hot climates, and he acknowledges that the affections of the bones attributed to mercury "very seldom take place;" but that they *never* happen, "he is *convinced* is not the case." Now to this we would reply in the words of the lawyer in the play —"no *convictions*, sir;—stick to *facts*." Dr. Thomson does not produce a single fact, nor does he assert that he ever saw a case of the kind. He is *convinced*, however, that they do occur—because "it is consonant to *reason* that they should." Again, say we—"no reasonings—stick to facts." For our own parts, we have seen, at least some thousands, who had undergone courses of mercury for dysentery, hepatitis, fevers, &c. and we cannot charge our memories with a single instance where diseases of the bones were the consequence. Dr. Thomson, indeed, endeavours to reconcile this exemption with the doctrines of the day, by *supposing* that the effects of mercury taken in foreign climes do not become apparent till the return of the patients to northern latitudes. But as this is, at the best, but a *petitio principii*, we shall pass it over. The conviction on our own minds is, that it is only in syphilitic diseases—or, at all events, that is *prin-*

cipally in syphilitic diseases, where the exhibition of mercury is followed by affections of the bones—but whether from the disease or the remedy, we do not know, nor do we think that there is, as yet, clear and unequivoccal evidence on the subject.

In respect to the curative powers of mercury in the ardent fevers of tropical climates, especially the West Indies, our author coincides with the most experienced practitioners, that, although where ptyalism takes place, safety is generally ensured, yet that the mercurial action can seldom be set up in time, where the fever runs so high as in the concentrated endemic of the western world. We should not, therefore, he properly concludes, trust to mercury, but rather to blood-letting and other antiphlogistic measures for the reduction of high febrile excitement, calling in mercury as an adjuvant for the restoration of impeded or deranged secretions in the system. While detailing some interesting facts relative to the fever which scourged our garrisons in Guadaloupe, in the year 1810, Dr. Thomson relates his own case, where a single detraction of 56 ounces of blood, from a large orifice, checked the disease in embryo, and was succeeded by sound refreshing sleep, with a kindly determination to the surface, which, with some aperient medicine, perfected the cure.

From fever the transition is natural to dysentery, a disease second, if not equal, in importance to fever, both in respect to the mortality and the prevalence of the complaint in hot and unhealthy climes. Dr. Thomson appears to have



" The mode of administering mercury, in which I chiefly relied, was that of combining calomel with opium. In this form of prescription we safely avail ourselves of the ease opium affords. Huxham observed, that purgatives procured a truce which opium prolonged, but that this often cost dear. The *relief* was temporary, but the symptoms returned with increased violence. This is not the case when it is combined with *calomel*, to which it is indeed a powerful auxiliary, tending to assist and accelerate its effects." 35.

The lancet and aperients, where inflammatory symptoms run high, must, of course, precede or accompany the administration of mercury in dysentery.

Our limits have prevented us from giving more than the most imperfect outline of Dr. Thomson's manuscript, which is characterized by diligent research, sound judgment, and liberality of sentiment.

We have now only to notice Dr. Swediaur's new edition, for the purpose of recommending it as a class-book for the young practitioner, without which he will have a very imperfect idea of the history, symptoms, varieties, and treatment of syphilis and syphilitic diseases.

Dr. Swediaur is a veteran, now retired, *in otio cum dignitate*, we believe, in Paris. He had spent many years in England, where he published the first edition, as far back as 1784, at Edinburgh. Two years afterward he published a second edition in London, without change of text. In 1788, a third edition, with corrections and additions, was given to the public, after which period Dr. Swediaur pursued, without intermission, his researches and observations on the subject till he amassed a great collection of materials, which induced him to publish a French edition at Paris, in 1798, being almost a new work. After this, he published two other editions, viz. in 1801 and 1809, with great additions and improvements. In the present English edition our learned and indefatigable author has developed his subject as far as the present state of our knowledge (with the exception of the recent experiments on the non-mercurial practice) would permit—omitting nothing essential that could elucidate the nature or treatment of this important class of diseases—not even the personal sufferings of himself, while labouring under them.

In the first chapter our author developes the history of diseases of the genitals, known to the ancients previously to the appearance of syphilis in Europe. In the second chapter he endeavours to explain and elucidate the history of the disease, *demonstrating*, we had almost said, " the falsity of the opinion of those who maintain that it came to

us from America by means of the Spaniards." In this opinion he is joined by the learned Sprengel, and others of minor note. He has rendered the opinion very probable that the syphilitic disease began to appear in Europe about the year 1483—at least he adduces evidence that it had spread in Italy and Germany, before the return of Columbus from his first voyage to America.

"I have proved that it showed itself in the commencement of its appearance in Europe, as an epidemic disorder, very contagious not only by contact with infected bodies, but also by their clothes and their utensils, and probably even by the atmosphere, without any species of contact; that there died of it a great number of individuals, and that it was regarded for this reason as pestilential; that it had then a great resemblance to elephantiasis, and especially to the *yaws* or *pian* of the Africans; that it lost by degrees the character of a pestilential and epidemic cutaneous disorder, and that it has ended by becoming mild, as we find it at the present day, and by its being communicated with much less facility." *Pref.* ix.

In the third and following chapters, our learned author treats of the effects of the syphilitic virus on the genital organs. He has made gonorrhœa a principal object of his researches. He considers the real primary seat of the disorder in men, as always in the cavity of the urethra, at the *fossa navicularis*, directly under the frenum. When it is found seated lower down in the urethra, it is generally, he thinks, the consequence of improper treatment, or some fault of the patient.

He thinks that both those who advocate and those who

rhœas as venereal with mercurials, and on the other by an ill-founded theory they suffer the syphilitic virus to be communicated and the disorder propagated through whole families, without giving themselves any trouble as to the unfortunate results." xii.

In the chapter on chancres or ulcers of the genitals, Dr. Swediaur endeavours to establish "essential distinctions" between the truly and false syphilitic sores, in order that the treatment may be discriminated. Our author considers the non-mercurial practice lately tried in England as "far from being established on any solid foundation." At the same time, he thinks it very imprudent to exhibit mercury indiscriminately in all venereal sores—and particularly to exhibit the oxymuriate of mercury as they do in France, when milder preparations are sufficient. In chapters 12 and 13 of vol. 1, our author shows that "primary, *i. e.* recent local syphilitic ulcers and buboes, are generally radically cured in three or four weeks, by simple external and topical applications of mercury." In our opinion, this passage speaks in favour of the non-mercurial practice—at least we think it proves the possibility of curing syphilitic sores without mercury—for the external or topical application of that remedy to ulcers, we believe, is next to nothing, as a mean of permanent cure. But while our author objects to trusting to sarsaparilla and the non-mercurial treatment, in the moist and cold climates of Europe, he thinks the sarsaparilla might be usefully employed as an auxiliary, and to secure the constitution against the effects both of the poison and the remedy.

In the French edition of 1798, Dr. Swediaur introduced a chapter on the "*mercurial disease*," which subject, he says, was then quite new, as he could not derive any information from books. "The authors who have since written on the subject, says Dr. S. have copied what suited them from my work, without acknowledging it, but have added nothing to the information I had already given respecting the disorder, or the mode of treatment I had pointed out."

In the treatment of mercurial diseases, Dr. Swediaur recommends the sulphureous mineral waters, and, in obstinate cases, the sulphureous vapour baths. Our author introduces a chapter, (the fifteenth,) containing a history of the syphilitic disease which showed itself, at the close of the last century, in Canada; which disease, Dr. S. thinks, throws new light on the history of syphilis, and on the action of the virus. The account of this disease which was rendered to the English Government, at the time, by an enlightened physician, has never been made public. but was obtained

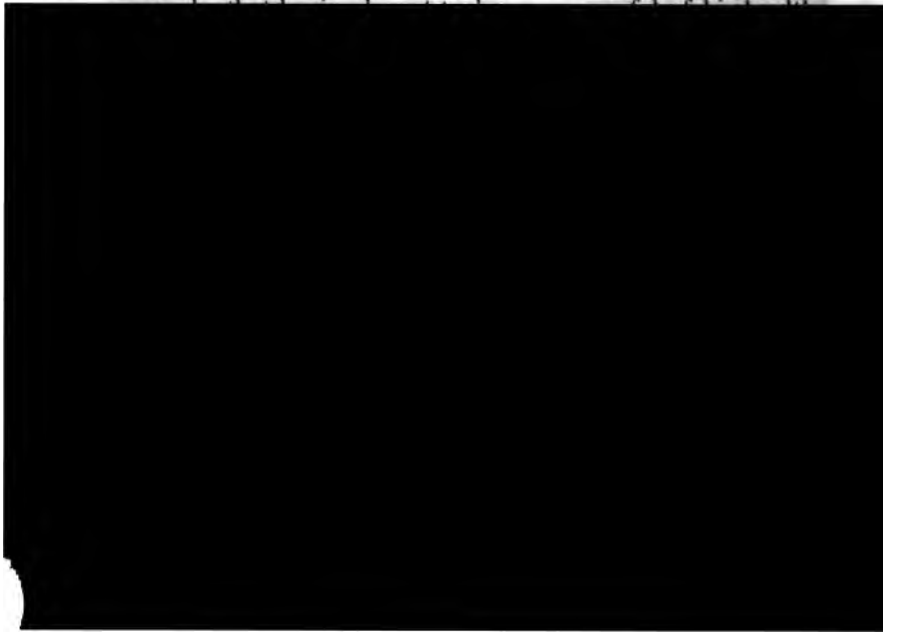
by him, and faithfully abstracted in the chapter above mentioned.

In fine, we cannot close this notice of Dr. Swediaur's new edition, without pressing it on the attention of the rising generation of the profession, as a class-book on the subject of syphilis, more copious, complete, and judicious, than any work of the kind in the English language.

X.

A Manual of the Diseases of the Human Eye, intended for Surgeons commencing practice, from the best national and foreign Works, and in particular those of Professor Beer, with the Observations of the Editor, Dr. C. H. Weller; illustrated by four coloured Plates, representing thirty-seven diseased Eyes, and one Plate of Instruments: translated and illustrated by Cases and Observations, by GEORGE C. MONTEATH, M. D. 8vo. 2 vol. Glasgow, Chapman, 1821.

A LATE ingenious writer,* who has taken a keen view of the progress which knowledge has made, and is likely to make, in this world, comes to the conclusion, that when society has fathomed all the depths of learning, and science found the boundary of its researches and experiments, the following will probably be *among* the most important changes—



a kind of physiological supremacy to the stomach, we must be convinced that there are other organs, the functions of which will continue to engross nearly as much of man's attention, to the end of time, as the "*gastronomic art.*" When will man cease to be charmed with the "*concord of sweet sounds*"—or fail to experience delight from a view of the beauteous and magnificent scenery scattered bountifully around him? The eye and the ear must for ever continue to be objects of man's most solicitous regard; and their diseases will doubtless attract a very considerable share of professional investigation to the remotest period of time.

Rapid as has been the progress of surgery in general during the last twenty years, the advance of the *ophthalmic* branch appears to have been the most remarkable of all—especially on the Continent, where it has been cultivated with enthusiasm. Priority necessarily secures a *temporary* superiority, in any art or science, and our German brethren look upon themselves as our masters in this department. At this moment, however, their superiority is very questionable, and there can be no doubt but that British genius, now that it is excited, will soon excel. Ophthalmic diseases and operations have now got into the hands of surgeons who have studied all the branches of surgery, and who are, consequently, best adapted for carrying this particular branch to perfection. It is not to *exclusive practice* that we object, provided it be preceded and attended by *general study*. There can be no more doubt that the regular surgeon, who devotes his time and attention to a particular train of operations, should be more *habile* than others in the performance of them, than that an able hospital surgeon should be more *au fait* with the knife, than he who rarely takes one in his hand. This observation applies more peculiarly to the ophthalmic operator than to any other. The eye of the well-educated ophthalmic surgeon being more accustomed to contemplate the delicate textures of the visual orb, is more ready to detect the morbid processes going forward in them; while his hand, employed principally to poise and direct the finest and lightest instruments, acquires a delicacy of tact, and steadiness of motion, which cannot be expected, and would be frequently unnecessary, in that of the general surgeon, however dexterous in the most formidable operations. Let us not be misunderstood. We mean that in the capitals and larger cities of the world, where wealth can patronize and support the minutest division of labour, we see no reason why the regular surgeon, who studies his profession thoroughly, and devotes his attention principally to ophthalmic diseases and operations, should not restrict his

practice, if so inclined, to that particular branch. At the same time, we are well convinced that the general surgeon, and even the general practitioner, may acquire, through the medium of those excellent public institutions now established throughout the world, such a knowledge of ocular diseases and operations as may qualify him for the discharge of this part of his duty, with honour to himself, and security to his patient.

The pages of this Journal have recently borne ample testimony to the excellence of British ophthalmology; but it is incumbent on us to lay before our readers an account of what has been done in those countries where the science has been cultivated still earlier, and with not less zeal than among ourselves. Professor Beer's fame resounds from one end of the Continent to the other; and therefore Dr. Weller has obliged and benefited the profession by compiling, and Dr. Monteath by translating, the principal points of the professor's doctrines and practices in diseases of the eye. Without farther preface, then, we shall enter on our analytical labours, and lay before our readers a series of samples of what they are to find in the work itself, the momentum of whose circulation, though already great, we hope materially to accelerate.*

Dr. Weller's plan, in this "Manual," is very comprehensive; his arrangement is simple and perspicuous; his doctrines are comprized under the following heads—an introduction—a sketch of pure ophthalmia in general—of the diseases of parts which surround the eyeball—and of those of the eyeball itself.

Division II. *Pure Ophthalmia in general.* This, like every other inflammation, is characterized by topical redness, heat, swelling, and pain. Two distinct stages mark its progress. 1st, Together with the local symptoms, are frequent nictation and a flow of tears, which sometimes disappears, giving place to dryness and immobility of the eyeball. In many cases, there is more or less aversion from light, and this sometimes ceases suddenly on the supervention of palsy. When the inflammation becomes intense, the general system is implicated. 2d, About the sixth day, a remission commences; the pain and heat abate; the arterial redness changes to a dirty blue or brownish-red; effusions of blood sometimes occur. The eye is now more tolerant of light; the ocular secretions and excretions are renewed; in some instances the parts around the eye are affected with œdematous swelling; and, if the first stage was severe, or neglected, or arose from causes producing loss of substance, suppuration ensues.

Pure ophthalmia may be caused by impure atmosphere, excessive light, sudden transition from darkness to light, over-exerted vision, injuries and wounds, unnecessary employment of spectacles, improper application of eye-remedies, use of the kaleidoscope, friction of tartar-emetic ointment on parts too near the eye, encephalic and ocular congestion, however induced, suppression of sanguineous discharges, dentition, and the irritation of carious teeth.

Particular circumstances will modify the treatment of either stage. 1st, All the exciting causes must be withdrawn, and foreign bodies of every kind removed. Dr. Monteath, in a foot-note, describes a very convenient method of discovering and extracting them, and illustrates its advantages by two practical histories. When severe spasm of the orbiculo-palpebral muscle is induced by mechanical or chymical irritation, the patient should be left in a dark room, and have a warm poultice of bread-crumbs boiled in water or milk, with some fluid opium, or leaves of henbane, applied over the parts. This being done, we institute an antiphlogistic treatment, general and topical, together with refrigerant draughts, tepid pediluvia, cooling aperients, and exclusion of light from the bed-room. If much symptomatic fever prevails, abstraction of blood from the brachial, jugular, or angular vein, temporal arteriotomy, and local scarifications ought to be practised. An ophthalmia arising from suppression of menstrual, hæmorrhoidal, or nasal hemorrhage, requires the application of leeches to the labia pudendi, around the anus, or on the alæ of the nose. Unguentum hydrargyri cinereum applied with a pencil will destroy crab-lice, which sometimes nestle in the conjunctiva of the eyeball. 2d, When debility of the ocular vessels impends, they are to be invigorated by dropping vinous laudanum between the eyelids, or by the use of astringent lotions and salves. The eye may now be exposed to a free, dry, warm air; and, if suppuration is established, to moderate light and the observation of agreeable objects. When the discharge is unhealthy, it will improve under the local use of tonic volatile remedies; and, if ulcers are formed, we bathe the eyeball with tepid solutions of *lapis*

divinus,* acetite of lead, sulpuric ether, or Peruvian balsam, containing a small proportion of vinous laudanum in each. Deep-seated ulcers require the lancet. In the suppurative fever, volatile stimulating medicines, with nourishing diet, are indicated.

Division III. *Diseases of Parts surrounding the Eyeball.* These are subdivided into two classes. 1st, Diseases of the external appendages of the eye *blepharophthalmitis* inflammation of the eyelids in general—*bleph. erysipelatosa*, erysipelatous inflammation of the eyelids—*blepharophthal. glandulosa*, inflammation of the glands of the eyelids—*ophthalmia neonatorum*, ophthalmia of new-born infants—*hordeolum*, stye—*anchylops erysipelatosa*, erysipelatous swelling of the eye's nasal angle—*tylosis*, callosity of the eyelids—*chalazion*, hailstone—*scirrhus and cancer* of the eyelids—*carbuncle* of the eyelids—*œdema palpebrarum*, watery swelling of the eyelids—*ptosis palpebræ superioris*, falling down of the upper eyelid—*blepharospasmus*, spasm of the eyelid—*lagopthalmus*, hare's eye—*entropium*, inversion of the edges of the eyelids—*trichiasis*, inversion of the eyelashes—*ectropium*, eversions of the eyelid—*anchyloblepharon et symblepharon*, adhesion of the edges of the eyelids with one another and with the eyeball—*pulpy, melicenous, and steatomatous, encysted tumours* of the eyelids and contiguous parts—*vesicles*, millet seeds, warts, and mulberries of the eyelid. 2d. Diseases of the organs situated between the orbit and eyeball—*general inflammation* of the orbit—*wounds* of the orbit—*dacryoadenitis*, inflammation of the lachrymal gland—*scirrhus* of the lachrymal gland—*lacryorhysis*, flow of tears—*atresia*, or obliteration of the excreting ducts of the lachrymal gland—*dacryops*, encysted lachrymal swelling—*hydatis*, watery vesicle of the lachrymal gland—*inflammation* of the lachrymal sac—*hernia, dropsy, and fistula*, of the

[redacted]

felt under the eyelid, and of dust in the nose occasioning sneezing, with pain in the eye and head; flashes of light pass before the sight; inflammatory fever arises as the disease proceeds; now begins the developement of suppuration; the ocular secretions are restored; coldness is perceived in the eye; and an abscess gradually forms. Antiphlogistic treatment, general and local, is of course indicated under modifications determined by the degree of inflammation and the peculiarities of constitution. When there is abscess, it must be opened and treated according to the character it may subsequently assume.

Blepharophthalmitis Erysipelatosa. Its symptoms, causes, and treatment, are little dissimilar from those of erysipelatous inflammation of any other part. More active remedies, we believe, would be employed in such cases by our countrymen, than the continental oculists venture to recommend.

Blepharophthalmitis Glandulosa. Edges of the eyelids affected with a bright-red, hardish, painful swelling; there is sometimes a sense of burning in the angles and edges of the eyelids; the secretion of tears is increased; they are acrid, and redden or excoriate the cheeks; if the inflammation extends over the conjunctiva, the eye becomes dry, and the presence of granulary particles is felt under its lids; anon, the dryness, burning, and itching diminishes; viscid mucus exudes from the meibomian glands; the conjunctiva palpebrarum swells and is vascular; the angles and edges of the eyelids are excoriated; the mucous secretion, by which the lids and lashes of the eye are agglutinated, more and more increases; it becomes puriform; and the disease has an exacerbation three or four hours after dinner or supper, when chylification has commenced. Early in the disease, it is to be treated with aqueous, or aqueo-acetic poultices applied cold and often renewed; when the muculent secretion has taken place, the eye is to be frequently bathed with weak solutions of the muriate of quicksilver in mucilage of quince seeds and vinous laudanum; when excoriations are present, they may be treated with Tanin's ointment,* in such strength as the parts in different subjects will bear; but if this produces no benefit, the lapis divinus may be tried; should the excoriations resist all these means and degenerate into indolent ulcers, the unguentum nitratis hydrargyri, or even the nitras argenti itself, may be cautiously employed.

Ophthalmia Neonatorum. A minute but not unfaithful account is given of the symptoms, causes, prognostics, and cure of this well-known disease; but we regard the treatment advised by Dr. Monteath, in a foot-note, as greatly preferable to the complicated exhibition of unguents, lotions, and salves, which our brethren on the Continent delight to employ. When the affection is recent, Dr. M.

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* ℞ Adipis suis scrofæ ℥j. oxidi zinci impuri præcipitati, boli armenæ, aa ℈ss. hydrargyri præcipiti albi ℥ii. M. fiat unguentum.

institutes an antiphlogistic course; after the second or third week, he practises scarifications of the eyelids, even to the third or fourth time. He then applies blisters to the middle and back part of the scalp, and afterward stimulates the abraded parts to give out a purulent secretion. So soon as the discharge and swelling of the eye begins to decline, he commences the use of astringents, and of these prefers a solution of the nitrate of silver, in the proportion of one grain and a half to an ounce of water. He applies it only twice a day, directs intermediate washings of the eye with tepid milk and water, and prescribes a daily exhibition of magnesia in doses regulated by the patient's circumstances and strength.

Hordeolum. An inflammatory circumscribed tumour, sited in a meibomian gland or the cellular substance on the edge of an eyelid, is generally connected with scrofula or other cachectic maladies. When cold poultices and lotions fail in determining its resolution, it suppurates, opens, and emits puriform matter. Weller dresses the consequent ulcer with a plaster of semivitrified oxide of lead; we prefer occasional applications of the ammoniaret of copper or nitrate of silver, in the form of a mild solution. Some years ago, one of our patients, who had long been annoyed with successive attacks of hordeolous inflammation in both eyes, was effectually cured by an accidental ptyalism.

Anchylops Erysipelatosa. Here, the nasal angle bears all the characteristic marks of pure erysipelatous inflammation of the eyelids; and, extending more or less to the neighbouring parts, runs a similar course, proceeds from like causes, and requires a particular modification of the same treatment.

Wounds of the Ophthalmic and Palpebral Regions. Their form and extent are determined by the agents with which they are inflicted: they refuse not, in general, to unite under the use of sutures or plas-

Palpebral Callosity and Cancer. The marks of these states are not different in the eyelids from what they assume in other organs: the cure depends on an early use of the knife.

Palpebral Carbuncle retains the ordinary carbunculous characters; it will yield to local scarifications and poultices containing decoctions of bark, with camphor and myrrh, and the internal use of cinchona and mineral acids.

Œdema Palpebrarum commonly appears in the upper eyelid as a soft, unirritable, pale, doughy swelling, which friction, with warm stimulating preparations, can remove.

Blepharoptosis consists in a morbid relaxation and extension, with consequent puckering, of the integuments of the upper eyelid, which cannot be raised. Cauterization, with sulphuric acid, the hot iron, and other means have been successfully used for its removal; but the best is excision of the cutaneous folds.

Blepharospasmus. An involuntary contraction of both eyelids, forming almost always a symptom or sequence of other diseases: and, when these are expelled, it will retire.

Lagophthalmos. An unusual state, wherein the upper, sometimes the under, eyelid appears shortened, and incapable of covering the ball. It is caused by relaxation of the affected eyelid, or occasionally by spasm of its muscles, and also by ill-cicatrized wounds, accompanied with loss of substance; sometimes it is congenital. Dr. Monteath has frequently found it originating from a temporary palsy of one half of the face, produced by exposure to a current of air. From observations of several cases, he is convinced that cold is its invariable cause, determining at first an inflammatory state of the pes anserinus, and perhaps in some cases, an inflammatory swelling and diminution of the caliber of the aquæductus fallopii, causing pressure on the trunk of the nerve. Pain, for some time, radiates from the ear, along all the branches of the nerve; it then ceases, and perfect semifacial palsy follows. "This disease," he adds, "is soonest overcome by antiphlogistic treatment for the first few days, then by applying a semilunar-shaped blister around the ear, and rubbing the paralyzed parts with stimulating liniments." Dr. Weller combats the spasm with antispasmodics, the relaxation with topical stimuli and tonics, directing his attention, at the same time, to the general diseases from which these conditions arise. When the disease arises from cicatrices of the integuments, incision of the eyelid and extension of the wound, till healed, have been tried, but without favourable results. Professor Dzondi continues frequently, for several weeks, to move the cicatrix backward and forward so as to dispart all its adhesions. He then divides it by a horizontal incision, loosening at the same time the subjacent cellular substance with the knife, to facilitate the stretching of the wound. The first dressing is dry, the rest with stimulating ointment, till granulation and cicatrization are completed.

Entropium. From the inversion of one or both lids, the eyelashes irritate the ball, excite constant lachrymation, inflammation, and a panniform opacity of the corneal membrane. It is troublesome, almost incurable, either by medicamental or chirurgical means. Saunders excided the tarsus as the best remedy, and seldom failed.

Trichiasis. Ciliary inversion constantly irritates the anterior surface of the eyeball, producing inflammation, excessive lachrymation, with corneal pannus, specks, and ulcerations. When it accompanies inversion of the eyelid, the entropic cure will also remove it; as a palliative, extraction of the inverted hairs may be practised.

Ectropium. The blear eye depends chiefly on eversion of the inferior eyelid. When confirmed, it cannot be remedied; when it is sarcomatous, it may be treated locally with laudanum or sulphuric ether, with mercurial, antimonial, or escharotic salves, and by excision; when it arises from relaxation or palsy of the orbicular muscle, stimulating eye-waters will mitigate its effects.

Anchyloblepharon is, when adhesion of the palpebral edges with each other is, in various degrees, complete. When the eyelid and surface of the optic conjunctiva unite to a greater or less extent, a *symblepharon* is formed, and, most frequently, has place in the upper eyelid. Both forms of the disease are, though rarely, congenital; occasionally proceed from psorophthalmic excoriations, but oftenest from traumatic causes. Nothing but the scalpel can remove either of these states; and when the operation is indicated, it consists in severing the coherent parts by minute and cautious dissection.

Pulpy, Melicerous, and Steatomatous encysted tumours of the eyelids and contiguous parts appear under peculiar forms, the nature of which may be ascertained by examination. Puncture of the tumour will dislodge its contents, and if adhesive inflammation succeeds a

of the iris, extreme sensibility of the eyeball, and painful flashes of light; now the sclerotica, then the conjunctiva, reddens; the iris becomes arched and changes its blue or gray to a greenish, or its brown to a dark red; the pupil closes, the anterior chamber lessens, pain is exquisite, synocha prevails, the patient grows delirious, and the encephalic membranes inflame. At this period, the antecedent local symptoms acquire greater intensity; the sick person often shrinks and shivers; one or more red soft tumours arise between the eyeball and orbit; they suppurate; œdema of the eyelids supervenes; but, if one point of matter only appears, the eyeball protrudes at that point, and the abscess does not implicate the rest of the orbit. Severe depletion, general and local, offers the only prospect of subduing the disease in its first stage; resolution being unattainable, suppuration must be promoted by the usual means; when fluctuation is quite evident, a large opening should be made with a lancet; then tents, moistened with laudanum and deposited in the ulcer, will induce granulation, and dispose the parts to cicatrize.

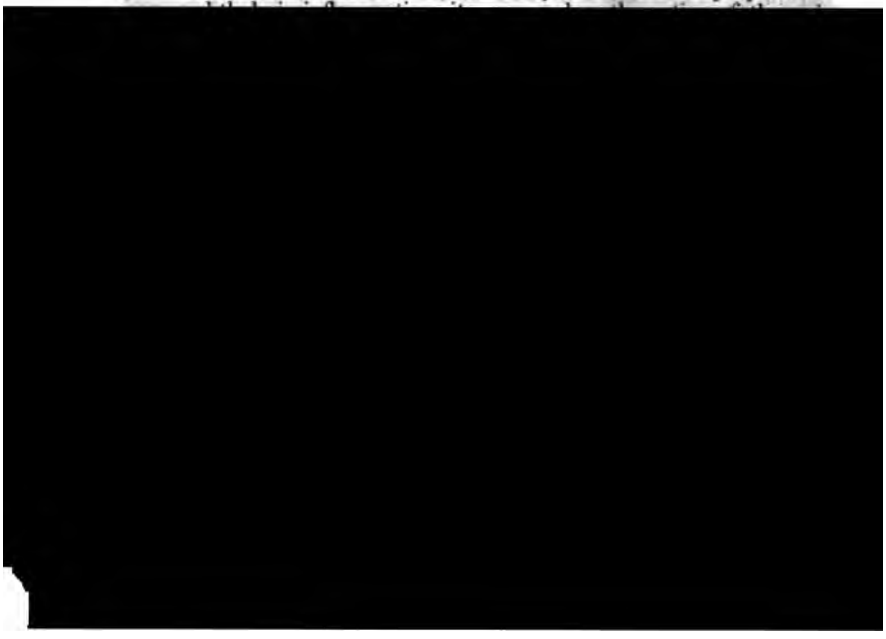
Wounds of the Orbit. Their general management is similar to that of other traumatic injuries. When incomplete prolapse of the orbit is caused by foreign bodies or infiltrations of blood, these must be withdrawn, and the organ replaced. If the eyeball has been forced altogether out of the socket, and is itself severely wounded, if the optic chambers are full of blood, and if perfect blindness exists, then the whole eyeball is to be removed.

Dacryoadenitis. Its causes are obscure; its occurrence not frequent; its influence severe and dangerous; young people between seven and nineteen years of age, and whose constitution involves a scrofulous propensity, are exposed to it; generally it originates from the action of a current of air on the eye, and sudden changes of temperature. Progressive dryness of the eye, then an abrupt, fixed, oppressive, stinging pain in the temples, extending over the eyeball, head, and face, are felt; the upper eyelid, opposite the lachrymal gland, swells, becomes hard, dark-red, tense, glistening, exquisitely sensible: the conjunctiva reddens; the eyeball feels hard and irritable; the lachrymal gland enlarges, pushes forward the eyeball at the external angle, throwing the cornea towards the nose; vision declines; the pupil contracts; the iris becomes immoveable; frequent flashes of light are perceived; mobility of the eyeball is more and more limited; pain increases; synocha and delirium supervene; all the symptoms are aggravated; there is a troublesome feeling of coldness and weight in the eye; a suppurated point, in the conjunctiva of the eyeball or external surface of the upper eyelid, appears, and is accompanied with constant shivering. Powerful antiphlogistic means are required in the inflammatory stage; venesection, arteriotomy, leeching, cold poultices, spare diet, and free alvine evacuations, are indispensable; suppuration will be promoted by warm poultices, containing chamomile or hemlock leaves mixed with other emollient medicines; while deep hardness continues and the eyeball projects, the swelling should be covered with a plaster combining

hemlock and the semi-vitrified oxide of lead; opium will relieve great pain and restlessness; soon as fluctuation is distinct, the abscess must be opened; when the matter is discharged, a tent moistened with laudanum, almond oil, or any digestive ointment, should be placed in the bottom of the ulcer, to irritate the parts and induce the process of granulation; if the discharge becomes sanious, and a pale red bleeding fungus sprouts out, announcing a fistulous sore from caries of the subjacent bone, the opening requires to be dilated by the knife and tented with stimulating unguents, to promote exfoliation of the bone; should abscess of the lachrymal gland terminate in a fistulous ulcer, or if any callous capillary opening in the upper eyelid remain, the nitrate of silver is to be carefully applied to the bottom of the sore. Our readers will readily discover, from the preceding and other accounts, that the continental ophthalmologists are absolutely ignorant of the decisive influence which calomel and opium, judiciously administered, exercise in re-balancing all inordinate actions of the nervous and vascular systems, on which the true inflammatory state indubitably depends.

Scirrhus of the Lachrymal Gland. It seldom occurs unconnected with a similar state of the neighbouring parts. Its chief symptoms are, the eyeball pressed toward the nasal angle, also downward and outward from the orbit; it is dry, almost immoveable, and cannot be turned toward the lachrymal gland; it is not painful and very little reddened; a firmly fixed, hard, uneven tumour appears in the temporal angle, and remains insensible till cancer supervenes; the eyelids are incrusted with half-dried mucus; the cornea is dim and even cadaverous. Beer rejects extirpation of the scirrhous lachrymal gland, and so will every honest surgeon.

Dacryorhysis. Unnatural secretion of tears varies, and requires suitable treatment. If it is a precursory or attendant symptom of



ball, and the tumour compressed, then the conjunctiva projects as a full roundish bag, in which the fluctuation of lymph is perceived. It is a very rare disease, remediable only by a nice operation, which our limits forbid our attempting to describe.

Glandula Lachrymalis Hydatoidea. This is a rare and formidable disease, whose causes are hitherto unascertained. It is thus described:—a cell of the cellular substance, connecting the individual glandules of the lachrymal gland, distend into a vesicle from the injection of tears which become acrid; it is then separated from the membrane adhering to it, and forms an isolated hydatid lying among the lachrymal glandules; advancing in growth, it pushes forward the eyeball from the orbit towards the nose, and, if its enlargement is slow, there is obtuse, deep pain in the orbit; the eyeball feels as if extruded, especially on turning it round the lachrymal gland; slightly reddened the ball now projects from the orbit; there is tensive pain in the eye and corresponding half of the head; dryness and difficult motion of the eye ensue; gleams of light flash before it; it becomes motionless; vision hitherto perfect is now double, inexact, or suspended; it grows confused and finally closes; the uninterrupted headach increases; the superior oblique muscle experiences incessant spasmodic movement: the eye acquires a dirty appearance, grows more like that of a dead person, and indicates approaching dissolution, even when the vital functions seem unimpaired; and, at last, a resisting hardness is distinctly felt in the temporal angle between the eyeball and external edge of the socket. If its progress is rapid, the pain is more in the eyeball itself, which, inflamed and enlarged, protrudes from the orbit, and, if not timely opened, suppurates, bursts under excruciating pains, and throws out a profusion of depraved matter and blood; but the organ does not yet collapse; it remains in the shape of an irregular fleshy mass external to the orbit; the headach continues; sleep and appetite are lost; the parotid of the affected side swells; and a resisting, firm, fluctuating hardness is felt in the region of the lachrymal gland. This disease, in its first stage, cannot be determinately known, nor the watery vesicle extirpated on account of the important parts lying in its vicinity; the following operation, therefore, is proposed as a palliative remedy. Under the upper eyelid and near its external commissure, insert a small lancet, deep in the direction of the lachrymal gland, until the fluid issues from the vesicle, then introduce a piece of catgut or fine bougie, made of charpie and charged with saturnine water or salve, so as to form an opening through which the fluid can be discharged; through this the cyst should afterward, if possible, be extracted with forceps; but if the eyeball be already pushed out of the orbit, vision destroyed, and the eye of a dirty appearance, death-like, or severely inflamed, and consequently altered in texture, even this palliative practice will not succeed.

Dacryocystitis. This is oftener a sequela or concomitant of variolous, morbillous, scarlatinous, scrofulous, psoric, syphilitic, or arthritic inflammation, than a pure disease, and consequently its presence

determines an appropriate modification of the treatment of each of these morbid states. When pure, it is harbingered by symptoms of a common catarrh; a bean-shaped, circumscribed, hard, sensible tumour forms in the region of the lachrymal sac, from which an obtuse pain extends to the eyeball and nose; it reddens, and is intolerant of the slightest touch; tears trickle down the cheeks, and the nostrils are dry; erysipelatous inflammation seizes the neighbouring parts; general indisposition and fever exist. By this time, much mucus distends the sac; the nasal duct is obstructed; the anterior part of the sac swells and feels elastic even before suppuration has commenced; increasing secretion by the mucous membrane of the nose and lachrymal caruncle takes place; the disease's crisis impends; and, either the permeability of the nasal canal is restored, and the mucous secretion improved, or the lachrymal sac suppurates, and, if unassisted, spontaneously bursts. Cold acidulated poultices over the parts, and frequent inhalation of cold water into the nostril, with leeching and general depletion, may be opposed to the primary symptoms; emollients will promote suppuration; the abscess ought to be laid open by a free incision with a lancet-shaped knife; the ulcer will granulate, obstruction of the ducts yield, and callous apertures of skin close, under an adequate exhibition of the ordinary means.

Hernia of the Lachrymal Sac. Distinguished by a bean-shaped, insensible swelling under the nasal angle, from which pressure removes a mucous fluid either through the lachrymal points or nasal ducts, and consequently empties the humour, but it soon fills again. Constant use of compresses moistened with astringent fluids, and a leather cushion retained over them with a proper bandage, will ultimately reduce the extant sac.

Encanthis Inflammatoria. Here the lachrymal caruncle and semilunar valve swell, become vascular, and painful; absorption of tears into the sac ceases; the lachrymal points and whole conjunctival membrane inflame; if suppuration ensues and is neglected, excrescences rise from the ulcerous surface, and often acquire a large size. Attempt resolution by the usual means; apply desiccative remedies to the ulcer, and escharotic ones to the morbid sprouts.

Encysted Tumours of the Orbit. Real encysted tumours containing a compact, fatty, or puriform mass, occasionally though rarely occur in the cellular substance which surrounds the eyeball. Their seat in the orbit is sometimes deep, sometimes superficial, generally under the eyeball, seldom at its side. As the tumour enlarges, it presses the eyeball so much outward and upward, that it acquires a peculiar appearance. Tears run constantly over the cheek; there is aversion from light; and, during the return of inflammation in the eyeball, the local pain extends over the whole head. This infrequent disease can only be cured by extirpation, which is done in the following manner:—The under eyelid being made tense, the skin and obicular muscle, in the direction of its fibres, are to be divided by a bistoury with a convex edge; the sac must then be seized with a suitable hook, drawn out from the orbit, and carefully extirpated. A bandage and graduated compresses, by moderate pressure, will replace the eyeball. Dr. Monteath excided two of these tumours. In one case the eyeball also was removed. "The tumours," he says, "exceeded the size of the eyeball, lay directly behind it, and so completely encircled the optic nerve, that the latter was diminished one half in thickness by the pressure of the tumour. Vision had been rapidly declining previously to the operation. This tumour was exceedingly hard, of anomalous texture, and surrounded by a layer of condensed cellular substance. Its anterior aspect touched and pressed upon the posterior aspect of the eyeball, but had no connexion with it, except through the medium of the optic nerve and cellular substance." The patient, a young woman, continues in perfect health, after the lapse of more than two years since the operation.

Orbital Aneurism. Few cases of this description have been observed; they are always preceded by ocular and encephalic pains: pulsation in the eye begins and increases; on touching it, a sense of rushing and thrilling is felt; headach becomes more frequent: humming in the ears takes place; and the eye is pushed sometimes out of the orbit. Obliterate the carotid of the affected side by ligature, or leave the patient to his destiny.

Division IV. *Diseases of the Eyeball, preceded by Observations on Wounds of that Organ.* This is subdivided into four classes. 1st, Diseases of the transparent parts of the eyeball—*conjunctivitis*. conjunctival inflammation—*pannus*, thick film of the eye—*pterygium*, winged film—*pinguecula*, fatty film—*fleshy* and *fatty fungus*, and *papula*, of the conjunctival membrane—*keratitis*, inflammation

of the cornea—*opacities, specks, and conical projections* of the cornea—*keratokelé*, hernia of the cornea—*lentitis*, inflammation of the lens—*cataract glaucoma*, glaucomatous opacity of the vitreous humour—*synchysis*, solution of the vitreous humour—*hydrophthalmia*, dropsy of the eye—*iritis*, inflammation of the iris—*mydriasis*, *myosis*, *et atresia pupillæ*, dilatation and immobility, unnatural contraction, and obliteration of the pupil—*artificial* pupils—*retinitis*, inflammation of the retina—*amaurosis*, nervous blindness—*strabismus*, squinting—*luscitas*, oblique vision—*myopia*, short-sightedness—*presbyopia*, far-sightedness—*diplopia*, double vision—*nyctalopia*, day blindness—*hemeralopia*, night blindness—*fungus hæmatodes* of retina—*ophthalmitis externa et interna*, external and internal inflammation of the eyeball—*staphyloma* of the cornea and of the iris—*synechia anterior et posterior*, adhesion of the anterior surface of the iris with the cornea, and of its posterior surface to the capsule of the lens—*oph. universalis*, inflammation of the whole eyeball—*atrophia bulbi*, wasting of the eyeball—*cirsophthalmia*, general varicosity of the eye—*scirrhus*, *cancer*, and *ossification* of the eyeball—*congenital* deficiency and superfluity of eyes—*specific inflammations*, including the catarrhal, rheumatic, gouty, variolous, morbillous, scarlatinous, syphilitic, gonorrhœal, iritico-syphilitic, syphilitico-scorbutico-blennorrhœal, psoric, scrofulous, dacryoblennorrhœal, and scorbutic ophthalmics.

Prosecutively of the method we had assigned ourselves, we again go on and submit an analytical view of the many important subjects of which this part of the manual professes to treat.

Wounds of the Eyeball. Circumstances, such as may be appreciated by any "commencing" oculist, will direct the treatment of these. Their mechanical or chymical origin distinguishes their classifications; their individual symptoms are various but determinable

network appears so thick that the limits between the sclerotica and cornea can hardly be distinguished, while the iris and pupil are still more indistinctly seen. It frequently originates from the irritation which trichiasis or ectropium produces. Often, however, it is a symptomatic disease. Leeches and emollient poultices will check its inflammatory stage; if it is ancient, or produced by cachectic affections, laudanum, with æther or mild escharotic powders, should be introduced into the eye; when these fail, issues, blisters, scarifications, and partial excision of the largest vessels may be advantageously employed. In obstinate cases, Dr. Monteath cuts out a portion of the conjunctiva, from a line to a line and a half in breadth, all round the edge of the cornea. On the second day after the operation nearly two lines of the corneal verge will have become transparent, and the clearing goes on progressively from the circumference to the centre. Owing to the density of its tissues, the latter part may not regain its transparency for weeks or months. When the pannus is scrofulous, attention should be directed to the improvement of the patient's general health, and his eye left undisturbed.

Pterygium proceeds from a triangular thickened fold of the conjunctiva, for the most part originating from the nasal angle, and connected with the semilunar membrane. It is either thin, half transparent, or grayish, and furnished with few blood-vessels; or thick, filmy, flesh-like, cartilaginous, and vascular. When thin and recent, it will vanish under the external use of powdered sugar and alum, or similar applications; when thick it is most safely and speedily cured by the knife.

Pinguecula is a small, flat, dirty yellow film, lying under the conjunctiva and near the temporal angle. It occasions deformity, but seldom interferes with vision. If its removal is desired, scarifications, or, preferably, the scalpel will execute the task.

Fleshy and Fatty Fungus. In scrofulous or syphilitic persons, fleshy excrescences arise on the limits between the cornea and sclerotica, and produce hairs of considerable length. Excide them, and apply astringent or mild escharotic remedies to the part.

Conjunctival Papula is a roundish, hard, pale-red, itchy swelling, not larger than a pin's head, and sited in the conjunctiva of the inferior eyelid, near the semilunar fold and lower lachrymal point. It is commonly dependent on irregular or defective menstruation, and disappears as that is remedied. If it does not disappear, seize it with a hook and cut it out.

Keratitis. Inflammation attacks the cornea, which becomes dim, muddy, and reddish, from slight enlargement of its vessels. It yields to antiphlogistic remedies, topically and generally employed.

Corneal Opacities and Specks. These exhibit a great diversity of shapes; but, with the exception of the bony kind, their nature is nearly uniform. Local means generally dissipate them, and these

are either emollient, resolvent, stimulant, or escharotic, degree, and division of the enlarged arteries by which they are fed.

Conical Projection of the Cornea arises from causes very little known; among others, from severe crying in difficult parturition. The young are generally, the old occasionally, attacked by it; sometimes it exists in one only, sometimes in both eyes at the same time. It consists in a pyramidal protuberance of the corneal membrane, advancing slowly and without inflammation. Its apex thickens, sometimes becomes opaque, and always forms the central point of the tissue which is its seat. When viewed laterally, it resembles a hard crystal; and, by preventing the proper view of the iris and pupils, it produces short-sightedness, and such a disordered refraction of the rays of light that even very near objects seem confused and imperfect. For its cure, the aqueous humour has been evacuated, and subsequent compression employed, but without benefit; infusion of tobacco dropped, several times a day, into the eye, is more beneficial; depression of the lens is sometimes of advantage, but is uncertain, and, in many cases, inapplicable. Although it seems to be nothing else than a dropsy of the aqueous humour, yet it is certain that medicines directed against such a dropsy are altogether inefficacious in removing this affection.

Keratocelé. Corneal hernia is a projection of the internal tissue of the membrane, in forms of a grayish, semi-transparent, watery vesicle. Fluid astringent and escharotic medicaments dropped into the eye promote its disappearance and prevent its return.

Lentitis. Lentic inflammation is a state generally precursive of cataract. Aversion from light, nebulous dimness of vision, and increased vascularity of the pupil, announce its developement; a fine wreath of vessels in the anterior capsule runs concentric with the

from its opacity; when cataract begins in the middle of the lens, it obscures objects presented immediately in front of the eye; the patient, however, knows whatever is placed to one side, and sees better in the shade than in bright day; for some time the flame of a candle seems enveloped in a whitish cloud; but as the disease advances, even this imperfect vision wanes, and the glare around the flame can only be perceived. 2d. When amaurotic blindness is impendent, the opacity has a deeper seat in the eye than the lens, and appears concave; its colour inclines more to greenish or reddish than to gray, though the dimness be inconsiderable, the patient is often almost blind; the pupil is dilated, and its edge more or less angular; the iris slightly or not at all moveable; the cornea dull; when the disease retains a paralytic nature, the eye loses its brightness, and the contour of a flaming light appears coloured like the rainbow. Alternate increase and diminution of sight depend not, in such a case, upon the pupilary dilatations and contractions, but on what causes invigorate or debilitates the whole frame.

Lenticular Cataract. This species lies considerably distant from the uvea, and exhibits no cloudy, bright-white specks; it begins in the centre of the lens with a yellowish gray colour, shaded off towards the edge; at the same time, the shadow of the pupil's margin represents a blackish ring, but that aperture itself ceases not to dilate and contract.

Capsular Cataract commences in the pupil's edge, in the indefinite form of white points, stripes, or specks; its colour is very bright, but unequal; it generally terminates in the capsulo-lenticular kind. Three varieties of it have been defined. 1st. *Anterior*—when the anterior half only of the capsule is opaque, and contains bright-gray, chalk-white, or leucomatous specks and stripes, it becomes thickened, sometimes fills the posterior chamber of the eye, consequently impedes the mobility of the iris, and intercepts the iridian shadow; and vision is deeply injured, nearly annihilated. 2d. *Posterior*—wherein the posterior half only of the lentic capsule is opaque, with muddiness, concave, grayish-white, irregular, but no chalky-white specks and stripes, uninterrupted mobility of the iris, and less impairment of sight. 3d. *Complete*—distinguished from the first variety by the posterior chamber of the eye being entirely destroyed by thickening of the capsule, the pupil being almost immoveable, and the iris sometimes arched.

Choroid Cataract, characterized by brownish, arborescent figures, on the anterior capsule of the lens, which may either become opaque, or continue transparent. Its nature is little known. Some ancient oculists regarded its brownish branchings as prolongations of the choroid coat. Beer considers them as the impression of the uveal tapetum upon the capsule of the lens; others believe they are in the substance of the capsule itself, or imagine that, being inflamed, its blood-vessels have been described under this name.

Morgagnian Cataract consists in a muddiness of the morgagnian humour, and is produced by sudden, chiefly chymical, influences upon the eye. The lens changes into a milk-like fluid, and perfect capsular, or capsulo-lenticular cataract supervenes. Its colour is milky, soft, and delicate, and the whole pupil seems cloudy; but the clouds change their form every time the eyeball is rubbed, or quickly or smartly moved; the posterior chamber is filled up, and vision more or less obscured.

Capsulo-lenticular Cataract. Here the opacity, when close to the iris, is partly chalky-white, partly like mother-of-pearl, and, in many parts, these shades are stratified upon each other, in such a way that the pearl-coloured always lies above the chalky-white layer; the iris is immoveable, but the pupil continues round; and, from the cataract's pressing the iris towards the cornea, the patient's perception of light is very imperfect. Its varieties are six. 1st. That which is accompanied with formation of new substance in the anterior capsule. It is *marmoraceous, fenestrated, stellated, central, punctated, or dimidiated,* according to the different forms which the new structure assumes. In almost all the varieties of the capsulo-lenticular cataract, the substance of the lens, with exception of its nucleus, becomes milk-white, or gelatinous. 2d. Encysted, which lies at different distances from the iris, according to the situation of the patient's head, and is distinguished by its snow-white colour; it often appears tremulous or swimming, and the cause of this depends on the connexion of the lentic capsule with the neighbouring parts having been weakened or destroyed. 3d. Pyramidal, originates always from violent inflammation of the eyeball, and is characterized by a white, almost glistening, cone-shaped growth, projecting through the pupil, and rising from the centre of the anterior capsule of the

and rendering the iris motionless, the eyeball atrophic, and vision indistinct, or annihilated.

Such are the species and varieties of cataract; its other differences depend upon the consistence of the lens and capsule. 1st. *Hard*, occurs mostly in old people, and is always lenticular; it is darkish or black, and reddish when held opposite light; vision is only limited, not lost; the motions of the iris are vigorous. 2d. *Firm-tough* cataract chiefly belongs to the capsular and capsulo-lenticular kinds. 3d. *Cheesy*, or gelatinous, has its whole substance or only its surface *soft*. It is always of a bright-gray, or grayish-white, or sea-green colour, unequally distributed. In this, the sight is often destroyed, and the iris's motions sluggish. 4th. *Fluid* is very difficult to be discovered by reason of the capsular opacity which accompanies it; vision, however, is not lost. When this opacity is only partial, the cataract, on bending the head forward, lies upon the uvea; but, if the head is held quiet for some time, a thicker sediment above, and a thinner structure below, are observed. 5th. *Fluid-hard*, is exemplified in the morgagnian and bursal cataracts. Besides all these, they may also be distinguished into the mature and immature, or the purely topical, and the locally, constitutionally, and perfectly complicated.

Cataract is often hereditary or congenital, and may originate from different causes—from ossification and closure of the lentic and capsular vessels at any period of life, chiefly in old age; from long misuse of the eyes; unusual, sudden, and strong light; protracted insolation of the head and eyes; working over bright fires; local effects of concentrated mineral acids and ethers; spirituous liquors taken to excess; ophthalmic and lenticular wounds; and, in most instances, from inflammation of the transparent ocular structures.

Perfect cataracts cannot be cured by medicines; incipient ones have yielded to mercurials, antimonials, digitalis, belladonna, and pulsatilla, in powder or extract. An eye-water of henbane and opium will dissipate muddiness formed by existing lentic inflammation. But the operation alone offers the best prospect of a cure; and, for it, the patient should be prepared by venesection, alvine depletion, temperance, and mental tranquillity.

Cataract may be removed—by depression—by depression and reclination—by extraction—and by keratonixis, cutting it into little pieces with a needle introduced through the cornea. Each of these processes, and the subsequent treatment, are described with comprehensiveness and precision; but the length to which this article must necessarily extend, precludes our attempting to transfer Dr. Weller's operative precepts into the pages of this Journal.

Secondary cataract is either lenticular or capsular, and occasionally succeeds the operation. The first is induced by remnants of the lens rendering the pupil opaque. Bags of aromatic herbs may promote its absorption; but, if this do not take place, the smaller particles are to be depressed, the larger reclined, and if a perfect cataract remains, it must, if possible, be extracted. The other exists when vision is obscured by the lentic capsule. When the opacity is considerable,

the capsule requires to be torn in all directions by the needle, and its flakes removed from the pupil.

We shall now conclude this branch of the subject with a case of *bony cataract*, for which the translator himself operated with complete success. A shoemaker, sixteen years prior to his consulting Dr. Monteath, sustained a violent stroke on his right eye. Ten years after this a surgeon attempted to couch the cataract, but failed. In January, 1818, this man was attacked with acute pain in the eye and head, which did not yield till after three months of severe medical and surgical treatment. In November following, the same pain recurred with violence. His sufferings now became agonizing the moment he raised his head from the pillow, deprived him of all comfort, and rendered him incapable of working. His surgeon in vain tried every possible means for his relief. He was leeched to a great extent, scarified often, freely bled from the temporal artery, repeatedly blistered over the head, underwent a three months' course of mercury. After ten months of dreadful suffering, debilitated and despondent, he came under Dr. M.'s care. The eye was now excessively tender, and considerably inflamed, the pupil much dilated, and filled with a yellowish, chalk-coloured projecting cataract, which nearly occupied all the anterior chamber. This cataract was firmly embraced by the iris, into whose aperture it had by some cause been forced. Extraction of the lens was advised; from a large incision of the cornea the cataract was removed with a hook. It was a perfect shell of bone, of the size and shape of the lens, and complete on all sides, except where the central artery enters the posterior capsule. The eye was dressed as usual, and the patient felt instant relief from all his sufferings. In a few days the corneal wound had adhered, and soon healed. On examining the eye, when free from all tenderness, it was found to have resumed its natural form and size.

vitreous humour becomes thin as the aqueous; its cells are gone; and the hyaloid membrane tears from the slightest causes; the lens is cataractous, soft, white, and cheesy; the eyeball is also soft; the sclerotica falls into folds; and atrophy of the eye finally supervenes. Complete synchysis is incurable.

Hydrophthalmia exists in three diversities of form—from too great quantity of the aqueous humour—from morbid increase of the vitreous humour—and from a complication of both these states.

1st. In this, the cornea's circumference increases to four or five times its diameter, without bursting; it still remains transparent, but at a later period becomes muddy; the anterior chamber enlarges; the iris ceases to move and grows darker; the pupil is neither contracted nor enlarged; weight with tension and oppression, is felt in the whole eyeball; at the outset, there is far-sightedness, latterly amaurotic amblyopy, and difficult movement of the eye; and the sclerotica, around the corneal margin, obtains a bluish cast. Its causes can seldom be discovered; its cure is uncertain. When it has been consecutive to a general disease, that disease must be first cured; if it is local or the effect of ocular inflammation, give digitalis with calomel, aqueous drinks containing supertartrite of potash with borate of soda, and apply blisters, setons, and similar means; when it arises from repelled eruptions, reproduce these or artificial ones, and exhibit internally camphor, sulphur, and the precipitated sulphuret of antimony. At the commencement, dry warm bags of aromatic herbs should be placed over the eye, and the supra-orbitary region perfricated with mercurial and stimulating unguents, or liniments; when such means fail, as they generally do, the cornea, when the eye is not varicose, must be punctured, and the aqueous humour evacuated.

2d. Dropsy of the vitreous humour shows the posterior half of the bulb enlarged, and the cornea projecting in a conical form, without increasing in circumference or losing its transparency; the iris is motionless, and arched forward; its colour is unchanged; the anterior chamber sometimes obliterated; the pupil is partially contracted, dilates when the untorn vitreous humour presses forward the lens; the sclerotica is distended, its corneal margin bluish and impure. Early in the disease, the eye is short-sighted, afterward weak-sighted, ultimately blind. In this kind, the motion of the eyeball and eyelid is soonest impeded, pain in the eye and affected side of the head, want of sleep, and loss of appetite, progressively increase, and often drive the sufferer almost to despair. At last the cornea bursts, the fluid escapes, the eyeball sinks and becomes atrophic; or, in cachectic subjects, the ball degenerates into a fungous mass, grows indurated, and proceeds with excruciating pains, to form a cancerous ulcer. Its causes remain indefinite: not seldom it follows gout, syphilis, scrofula, or ophthalmic inflammation; it may yield to some active modification of the treatment prescribed for the first variety, but failure in this is more certainly inevitable.

3. When both kinds combine, there is a very varicose state of the

eyeball, which frequently attains an enormous size, projects from the orbit, and exhibits the true buphthalmic eye. Here local means must never be used; a palliative and constitutional treatment alone is indicated; when this is unprofitable, extirpation of the morbid organ waits in reserve. Even this sometimes ends in the supervention of a spongy carcinomatous fungus in the orbit, which gradually extinguishes life. In an elaborate foot-note, Dr. Monteath introduces a case of hydrophthalmia combined with a tremulous capsulo-lenticular cataract, which occurred in his own practice. Our readers, at Vol. II, p. 142, 451, of the Medico-Chirurgical Journal and Review, for 1819-20, will find the detail of some cases of ophthalmic dropsy treated on principles drawn from a particular view of the disease, nature, and developement.

Iritis sets out with obtuse, heavy, deep pain in the eye, dimness of vision, pupilary muddiness, increasing aversion from light, progressive diminution of all the iridial motions, without affecting the pupil's circular form and position, or its contractions. At first, the small iridian circle, afterward the large one, assumes a deepening colour, the floating curtain, when gray or blue, becomes greenish; and reddish, when brown or black, it also swells and projects; vision fails, and pain increases and spreads as the inflammation extends over the anterior capsule and deeper structures of the eye; there is synochal fever; the sclerotica is rose-red, with the redness shading off toward the circumference; and the cornea loses its peculiar lustre. These symptoms attend the first stage; as the second advances, the pain becomes fitful; there are flashes of light; augmented conjunctival redness; angularity of the pupil, which contains a delicate albuminous mesh, determining cohesion of the iridian circles with the inflamed anterior capsule of the lens; lymphatic exudation into the pupil now supervenes, and sight is destroyed; projection of the iris

Pupilary Anomalies. *Mydriasis* may be an effect of encephalic or ophthalmic dropsy; of vermiginous, amaurotic, hysterical, or hypochondriacal disease; or of genuine iridial palsy. Adhesions of the uvea, with the anterior lentic capsule, and protracted exposure to darkness, will induce it: it is sometimes congenital. Attempt its cure by removing the primary disease, blistering the eyebrows, and by the internal and external use of antiparalytic medicines. Palliate it by shading the eyes, and using tubulated spectacles. *Myosis* is sometimes congenital, sometimes symptomatic of hypochondriacal, hysterical, and other nervous affections. Observation of minute, glittering objects, determines it; occasionally it is the offspring of internal ocular inflammation. Remove the morbid state from which it proceeds, confine the patient to a dark chamber, advise a green shade, tubulated spectacles, or the introduction of belladonnian extract into the eye, as means of cure. *Atresia Pupillæ* is rare; it is often congenital; it follows inflammation of the eye, absorption of matter, extravasated blood, and adhesion of the iridian and corneal surfaces. The congenital is generally removed by spontaneous disruption; otherwise, the operation for artificial pupil is required.

Artificial Pupils are formed in three ways—by *corotomy*, incision of the iris; *corectomy*, excision of a part of that membrane; and *corodialysis*, tearing the iris from its ciliary connexion.

1st. Incision of the iris, discovered by Cheselden, and improved by Janin, is now little used. M. Maunoir has invented a different method by which it may be performed. He introduces into the anterior chamber, through a previous incision of the cornea, his corotomic scissors; gently opening them he perforates the centre of the iris with the lower sharp and pointed blade, pushes it along the posterior surface of this membrane, till the upper blade, which is furnished with a knob, has reached that part of the anterior chamber where the cornea is united to the sclerotica, and cuts at once through the iris. A second incision, diverging from the first, is now made in the same manner and in such a way that the cuts form a V, the point of which is in the centre of the floating curtain, whose circular as well as radiated fibres soon act, and an orthogonal or semilunar pupil restores vision. Another method, a simpler one indeed, has more recently been projected by Sir William Adams; but, lest our feeble voice may not be heard amid his iotacismal pretensions to originality and perfection, we resign to the ophthalmological knight himself the innocent pleasure of vociferating his own excellence—of promulgating his own praise.

2. Excision was first performed by Wenzel the father; from Gibson it received some modifications; Beer performs it in the following manner. Having, with the cataract-knife, divided the cornea one line in length, and as near the sclerotica as possible, if the iris be nowhere attached to the cornea, and extrudes through the incision, he seizes the projecting part with a hook, and clips it off in a line horizontal to the lips of the wounds. This done, the iris soon retracts, and a well-shaped pupil appears. When the iris adheres

to the cornea, and the pupil is only distorted, on finishing the corneal incision, he introduces the hook through the wound, so as its point is neither directed toward the iris nor the cornea, twists with it the pupilary edge of the iris in an oblique direction, draws it through the opening, and clips away the protracted part. If the pupilary edge of the iris adhere to the cornea at the spot, where the artificial pupil should be made, the larger iridial circle must be seized by a hook or forceps, and the necessary portion excided. When a central leucomatous opacity intercepts the passage of the rays of light through a regular pupil, Himley opens the cornea near its periphery, introduces a hook into the anterior chamber, lays hold of the iris's pupilary margin, draws it through the incision, and leaves it fixed in the wound, when it unites with the cornea, and the oblique pupil appears at the leucoma's side. If the cornea and iris are destroyed, Autenreith forms a pupil, by cutting out a part of the sclerotica and subjacent opaque tissues; and, after this, the wound gets covered with a thin pelloroid film, through which vision may be possible.

3. Corodialysis was originally practised by Schmidt, Buzzi, Assalini, and Scarpa; Reisenger, Langenbeck, Himley, Graëfe, Wagner, and others suggested improvements of the process. Reisenger makes a small opening in the cornea, introduces hooked forceps, through the anterior chamber, as far as the iridian circle; turns their points toward the iris; opens the forceps; catches and hooks the iris; separates it from the ciliary ligament; recloses the instrument; draws part of the iris through the corneal aperture; and entangles it there, where adhesion secures it from retracting.

Retinitis. Bright light, looking long and steadily at glistening objects, suppressed nasal hæmorrhage, and every thing capable of irritating the retinal expansion, originate this disease. It is harbingered by aversion from light, lachrymation, headach, and deep

sent; these sensations frequently precede, or are coexistent, with incipient blindness; when pain is extreme, inconsciousness and delirium are concomitant; and in such cases extensive organic lesions of the bones or brain, particularly of the cranial bones, are discovered; when memory and perception begin to fail, death soon ensues; vision, moreover, may be hemioptic,* ateloptic, myodesoptic, photoptic, photophobic, oxyopic, nephodic, diplomic, chruptic, strabismal, or luscitant; sometimes patients are short-sighted, sometimes far-sighted, at other times see objects misshapen or displaced.

2d. In the objective, the pupil is often too large, occasionally too small, almost always distorted and angular; at one time, it is smoky and clouded, at another dark-gray or greenish-gray, and not seldom reddish or yellowish-white, when it obtains the cataractal opacity: in all these cases the muddiness appears distinct in the posterior part of the eye, and visibly concave; generally the iris is immoveable: when one eye only is amaurotic, both pupils sometimes contract and expand so long as both eyes are open; but if the second be shut, the other's iris is immediately fixed, and the pupil angular and enlarged; lethargy often, and insomnolency, with paralytic and convulsive symptoms, supervene; and when the latter arise, an unfavourable issue impends.

Manifold and various are the causes of amaurotic blindness, but on their particularization we decline to dwell. Beer, and after him Weller, enumerates the varieties of Amaurosis under four generic and eighteen specific distinctions. 1. Dynamic amaurosis, whose symptoms are subjective only, and the eye remains unaltered both in structure and form; this arises from over-excited vitality of the ocular nervous textures, and from the vitality of the optic nerve being too much depressed. 2. Amaurosis, wherein the ophthalmic organization is morbid—this is the aluroptic (cat's-eye) amaurosis which has been theoretically regarded as dependent on absence or defect of the choroideal point. 3. Amaurosis from malformation of the eye in general, or of its individual parts, especially of its irritable tissues;—it is excited by immoderate use of bitter or narcotic food or medicine, and the improper application of lead; it is symptomatic of hypochondriacal, hysterical, epilectic, convulsive, and nervous affections in all their shapes; it arises from a loaded state of the bowels; it is vicarious of acute cutaneous eruptions; it is rheumatismal; it alternates with repelled cold in the head, without a sensible collection of mucus in the frontal sinuses; it is purely paralytic; and it constitutes a symptom of hydrencephalic effusions.

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* We have not been betrayed into the use of these and other appellatives by the unworthy influence of affectation or pedantry: our paramount object at all times is, to diffuse the greatest proportion of useful knowledge in the fewest words and in the smallest possible space. Such motives, we know, will be rightly appreciated by the intelligent class of our profession: to the approbation or censure of others we are indifferent.

4. Mixed amaurosis, in which the characters of the former three kinds are blended;—this is traumatic, proceeding from injuries of the ocular region; it is arthritic, being determined by neglect of the body and mind, in a gouty habit; it takes place after quickly repressed and cured eruptions on the head, old ulcers of the feet, in itch, and in plica polonica, when the hair has been shaved; it is an immediate consequence of a very severe and suppressed fit of passion; it follows repressure of encyphalic catarrh with deposition and matter in the sinuses of the frontal region; sometimes, though rarely, it is sequent to an abrupt interception of the lacteous secretion, during the puerperal state, and it originates from structural lesion of the optic nerve and of the skull and brain. Each of these amaurotic conditions is particularized by a characteristic definition; its etiological and prognostic distinctions are superadded, and its management illustrated by a circumstantial series of hygienic and therapeutic rules. However valuable and instructive these precepts may be, it is obvious that we cannot here undertake their transcription; we shall therefore dismiss the subject with a concise exhibition of the treatment wherewith Dr. Weller proposes the disease's general phenomena should be mitigated or repressed.

When the causes* of Amaurosis have been discovered and their nature and degree duly considered, their removal must be attempted by suitable means. If, however, it is impossible to ascertain them, then, says Dr. Weller, nothing remains for our guidance but well-regulated empiricism, in which the age and sex and the diseased appearances with which the amaurosis originated, are to be taken into consideration. By this rule, then, emetics may be employed to remove gastric impurities, or to operate a change upon the nerves;—purgatives, to regulate the assimulative functions, and to relieve sanguineous congestion of the head;—diaphoretics, to open the capillary vessels, and balance inordinate cutaneous action;—emmenagogues, to

Fungus Hæmatodes Retinæ consists in fungous degeneration of the retina, and observes the following course:—an amaurotic amblyopy, with complete dilatation and immobility of the pupil, and aversion from light, proceeds to perfect blindness; at the same time is seen in the retinal region, a body resembling a concave silver plate, or piece of polished steel; by and by, this metallic appearance changes into a yellowish or greenish irregular speck, not unlike coagulable lymph effused into the bottom of the eye, and counterfeiting a partial opacity of the vitreous humour; the conjunctival vessels are loaded, and the eye in constant pain; furnished with blood-vessels from the central ophthalmic artery, the little greenish or yellowish mass increases by degrees, extends toward the iris, and is recognised as a yellowish, spongy substance; pain in the forehead and nape become aggravated and experiences nocturnal exacerbations; the fungous mass enters the anterior chamber, which now appears turbid; the eyeball begins to be modulated, and the sclerotica assumes a dark-blue or livid colour; occasionally the eyeball about this period becomes dropsical; the growth now reaches the cornea, which is turbid and thinner from the pressure, begins to suppurate, and thus allows the fungus to project externally, attended with agonizing pain; forthwith the morbid mass acquires a reddish colour, mingled with yellow or black spots, but always retains its peculiar soft, spongy, cerebriform consistence; on the slightest touch, it throws out much blood and an offensive ichor, resembling the washings of flesh; the fungus being fairly formed, symptoms of the absorption of ichor arise; the lymphatic glands, in the parotideal, submaxillary, and cervical regions, swell; and, exhausted by an irremediable and unmitigable disease, the patient languishes, emaciates, and expires. Remedial and palliative applications are here useless; extirpation of the eyeball is almost always unavailing; for in a short time, the malignant excrescence repullulates, or penetrates the cranium, destroys the optic nerve and contiguous tissues of the brain.

Ophthalmitis Externa originates from extraneous bodies entering the eye and eyelid, superficial wounds of the eye, sting of a wasp or bee, and similar causes. It commences with diffusive conjunctival and sclerotic vascularity; painful motion and dryness of the organ and its coverings; progressive corneal suffusion and opaqueness; invisibility of the pupil and iris from turbidity and redness of the intervenient membranes; decreasing vision, actions of the eyeball over-forward; inflammatory fever; the conjunctiva now swells and becomes dark red; the cornea acquires a white, then a yellowish colour, and finally suppurates, leaving the eyeball immoveable, whitish, shrivelled, indented. Remove the cause if known; and, for general treatment, institute spare regimen and depletion; for topical, employ leechings, scarifications, lotions, liniments, unguents.

Ophthalmitis Interna. It is rare; its causes are ill defined. An oppressive tension, obtuse pain of the whole eye, rapidly acquiring intensity, and spreading over the eyebrows and head, usher in its

first stage; there are flashes of fire before the eyes, decrease of vision, muddiness and closure of the pupil; if gray or blue, the iris changes to green, and to red when it is brown or black; it also swells, presses toward the cornea, and lessens the anterior chamber; as the iris swells the sclerotica and conjunctiva redden; there is severe headach; the cornea loses its brilliancy; synochal fever prevails; by and by, suppuration begins, advances, maturates; pus is deposited in the anterior chamber; and, if this is neglected, the cornea bulges, becomes conical, and bursts at last under unsufferable pains, which subside not till the eyeball retire. Treat this as a general ophthalmic inflammation; when pus is formed, promote its abruption; place blisters behind the ear and on the temple; moisten the eye often with vinous laudanum; open the cornea with a lancet only when disruption impends; and, with incarnative dressings, guide the ulcer to granulation and health.

Staphyloma Corneæ takes place, when the cornea loses its transparency, and swells; when the iris is tumid and projects; when these inflamed membranes cohere; and when secretion of the aqueous humour is not destroyed: it is total, when adhesion of the iris with the cornea is general; partial, when a portion only of these tunics is united: in the latter, vision sometimes remains; in the former, blindness is certain and life insecure. Astringents, caustics, pyrotics, and such means offer but a doubtful obstruction to the developement of a staphylomatous tumour; even the operation seldom succeeds. When this is indicated, Beer's method may be preferred. With a cataract-knife, he perforates the tumour's base from the temporal to the nasal angle, and completes the flap by pushing on the knife horizontally, as in extraction. During this process, an assistant holds up the superior eyelid, and must not allow it to fall down, after completion of the first cut. The operator now seizes

attached to the iridial surface. The former, when ancient, is incurable; if vision is not much deteriorated interference is improper; for its removal, perforate the cornea with a cataract-knife, separate the adhesion from below upwards, preventing, at the same time, premature escape of the aqueous humour. When *total*, the latter is irremediable and combined with cataract; when *partial*, it is sometimes cured by external and internal medicines.

Ophthalmitis Generalis. Its symptoms are severe, pressing, tensive pain in the eye and its appendages; increasing conjunctival and sclerotic redness; conjunctiva of the eyeball swells and forms an equable, irritable, hard wall around the cornea, whose centre at last can hardly be discerned; the pupil is contracted, the iris immoveable, vision nearly or altogether lost; photopsy augments the local pain; the blue or gray iris becomes greenish, and the brown or black changes to red; the eyeball enlarges and loses its mobility; the cornea grows muddy, then opaque; the eyelids inflame, the under one is everted; secretion of tears and mucus ceases; inflammatory fever, with suspension of consciousness, predominates. The second stage now sets in, with augmented conjunctival tumefaction; it grows dark-red, but softer; the pain is irregular, pulsating, pricking; the upper eyelid is stretched, and acquires a bluish-red colour; the visible part of the cornea becomes snow-white, then yellowish; weight and coldness are felt in the eye and orbit; the eyeball, if unassisted, bursts with an audible report, and discharges the remains of the lens and vitreous humour; and in some instances the scene is closed by the supervention of gangrene, sphacelus, and death.

Venesection, alvine evacuations, topical leechings, and refrigerant lotions, radiated scarifications of the conjunctiva, and, if there be encephalic excitement, puncture of the jugular vein, will, if it is attainable, promote resolution. When suppuration is imminent, lenitive poultices and internal tonics will accelerate its course. Gangrene must be opposed by cataplasms formed of warm, concentrated decoction of bark, treacle, Peruvian balsam, and vinous laudanum, with the internal use of cinchonal, ethereal, and similar medicines.

Atrophia Bulbi. It will not be mistaken; very often it is a consequence of arthritic ophthalmitis; it is incurable: when the atrophic eyeball can bear the irritation, an artificial eye may be introduced.

Cirsophthalmia. This state is often induced by frequent or neglected inflammations of the eyeball; in it, although a sense of light fails, flashes of different colours are observed; the eyeball is indurated, conical, enlarged; its lids no longer cover it; its white changes to dirty blue, or is lead-coloured; the conjunctival, sclerotic, and choroidal vessels are varicose and replete with dark blood; the cornea becomes opaque or staphylomatous; the iris is fixed; motion of the eyeball slow, the pupil dilated and angular, with a muddiness perceptible behind it. Interfere not with these symptoms; they may exist long without an increase: strong and corrosive ap-

plications irritate the eye; its largest varicose vessels burst, and the chambers fill with extravasated blood; even rupture of the eyeball itself, with alarming hæmorrhage, carcinomatous change of structure, misery and death not unfrequently ensue.

Scirrhus and Cancer. Nodulated, irregular, whitish-red, indurated unpainful tumefaction of the eyeball, announces the scirrhous condition; the ophthalmic vessels are varicose, turgid with violet blood; as cancer is established, the ocular tunics become thickened and sarcoidal; a stinging, itching, burning extends all over the head; ultimately, the eyeball changes into an irrecognisable mass, resembling hard flesh; its size enlarges; hectic fever is kindled; one or more cancerous ulcers form; excruciating pain is experienced; hæmorrhage from ruptured varicose vessels is frequent and exhaustive; the ulcers acquire a wart-like base, with everted, hard, lead-like edges, and discharge a nauseabund ichor, which is the certain forerunner of dissolution. Alleviate the predominant symptoms, while palliation avails: as the last, but equivocal recourse, extirpation of the eye may be performed.

Ophthalmic Ossification. The sclerotic and choroideal coats of the eye have been found in an ossified state, with complication; the iris also, the retina, the optic nerve, and even the whole eyeball, have been converted into bony structure.

Congenital Deficiency or Superfluity of Eyes not unfrequently occurs. Dr. Monteath, at vol. ii. p. 207, in a foot-note, relates a remarkable instance wherein three out of eight children were born without any vestige of eyeballs. Their mother, previously to her marriage, was some time servant in the family of the writer of this article, who attended the daughter during her last illness. Both parents are perfectly formed, healthy, and virtuous.

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from ulcerations, various in their inveteracy and extent. Meet it in the first stage with topical depletion and resolvents, and with mild diaphoretic remedies, internally exhibited; when stronger means are required, guaiac, camphor, leopard's-bane, and antimonials, with cervical and post-auricular vesications, and opiate plasters, may be tried; the ichorous ulcers, if the general health is maintained, will yield to the usual applications.

Ophthalmia Arthritica assumes an erysipelatous, an iritic, or sclerotic character. In the former, on repression of gout, the eyelids experience burning pain, and a pale-red vesicular swelling, which soon arises into a bladder containing yellow acrid lymph; this tumefaction extends to the conjunctiva of the eyeball and lachrymal sac; acrid tears now begin to flow, but are soon displaced by a blephoro-blennorrhœal and ophthalmo-blennorrhœal discharge, which proceeds rapidly and unremittingly to destroy the eye by colliquation. Recall the suppressed gout with pediluvia and sinapisms round the feet, vary the common topical applications according to circumstances, and let a diaphoresis be promoted. Its two latter forms carry the marks of sclerotic and iridial inflammation, but in an aggravated degree. They are to be managed as such, and particular attention, at the same time, paid to the primary disease.

Ophthalmia Variolosa is—1st. Variolous blepharophthalmy, wherein, as the small-pox appears, the eyelids swell, close, and are covered with pustules, which dry about the ninth day, and the eyes reopen; in some patients, the conjunctiva inflames; there is photophoby and dryness, with sense of foreign bodies in the eye. Here defend the eye from irritating agents; promote derivation by blisters, open the pustules when maturated, and wash them with tepid milk or mucilaginous opiated eye-water, exposing the eye at the same time to dry warm air and moderate light. 2d. External variolous ophthalmy presents itself with conjunctival and sclerotic redness, great aversion from light, stinging pain, and a flow of tears; turbid points appear in the cornea, and the iris is affected; on the vascularity and retinal irritableness subsiding, the cornea loses its transparency, and genuine pustules form on its opaque parts. Prevention of this disease is strongly indicated; and, for this purpose, camphorated compresses should be placed over the eyes, which are to be frequently moistened with lard or solutions of the acetite of lead; the inflammation may be treated with cold aqueous poultices, and a blister or cautery behind the ears; the pustules require being opened, the ulcers assisted to granulate and heal; and the powers of restoration supported by exhibitions of aromatic, ethereal, cinchonal, and opiaceous drugs. 3d. Glandular variolous ophthalmy usually begins with a blepharo-blennorrhœal, and terminates in an ophthalmo-blennorrhœal state, which is to be removed by modifications of a suitable treatment.

Ophthalmia Morbillosa et Scarlatinosa. Little dissimilarity is perceivable in the symptoms of these inflammations. They com-

mence with conjunctival and sclerotic erubescency, photophoby, effusion of acrid tears, deep stinging pain on the eye, glittering spots on the cornea, and secretion of pungent nasal mucus; with aggravation of these, the palpebral margins become red and irritable; conical watery vesicles arise on the cornea; these burst and form ulcers, from which issues a thin acrimonious discharge. Keep the eye uninfluenced by every stimulating cause; and, to avert the formation of ulcers, place blisters behind the ears or on the arms; when the vesicles burst, and the ulcerative process is declared, appropriate lotions and salves, with constitutional remedies, will come to be required.

Ophthalmia Syphilitica. Sometimes it is a sequence of confirmed lues, sometimes an irregular gonorrhœal symptom. In the first, it appears as a syphilitic iritis or a syphilitico-scorbutico-blennorrhœal ophthalmy; in the second, it always shows itself as a blennorrhœa of the eyelids and eyeball.

Ophthalmia Gonorrhoica. It is either vicarious of a venereal clap, or proceeds from the eye being infected with gonorrhœal matter. It begins, at various intervals after suppression of the urethral discharge, with a bright red, hard, painful swelling on the edges of both eyelids, which is forthwith propagated to the conjunctival and sclerotic textures, and throws a hardish, tile coloured zone around the cornea; intolerance of light and the ophthalmic pain increase; headach and feverishness predominate; at an uncertain stage of the disease, the palpebral and ocular conjunctiva pours out a whitish, then a yellowish or greenish-yellow mucus in profusion; swelling of the upper eyelid increases in a frightful manner, becomes livid, and hangs over the eyeball like a lump of flesh; at last, matter forms in the eye, the corneal lamellæ give way

lymph appear behind the pupil, and gradually extinguish sight; condylomatous swellings arise on the ciliary and pupilary edge of the iris; and, at the same time, fatty ulcers form upon the cornea and white of the eye. The cure consists in removing the nocturnal pains of the bones by friction of the superciliary regions with opiated mercurial ointment, and placing on the eye a warm linen compress; at the same time, the nitric oxide or submuriate of quicksilver with opium, may be exhibited internally, care being taken to avoid salivation and purging, if there is apprehension for the patient's lungs; and ichorous ulcers require being treated with tepid astringent lotions, or the red mercurial salve.

Ophthalmoblennorrhœa Syphilo-Scorbutica. Neglected syphilis, debauchery, and filthiness, producing scorbutico-cachectic debility, occasion this disgusting complaint. Its pathetic accompaniments are—an immense bluish-red irritable, inflammatory swelling of the palpebral edges, without a previous or suppressed gonorrhœal discharge; troublesome itching and burning of the eyelid; the conjunctiva perfectly violet, and swelling like a vesicle into unequal prominences around the cornea; immobility of the eyelids; the lower forms a violet coloured, spongy ectropium, which readily bleeds; excessive flow of muculent fluid from the upper; a weak, intermitting pulse, bleeding gums, fetid breath, black corroded teeth, and complete blindness from disorganization of the ophthalmic parts. Here the treatment is the same as in pure blennorrhœal ophthalmy; only, mercury is distinctly contra-indicated, because in the smallest dose it excites injurious salivation, or colliquative diarrhœa, which often endangers life.

Psorophthalmia originates from repression of the psoric eruption, or from infection of the eyelids with the matter of itch. It is distinguished by a dark-red swelling on the palpebral edges, severe itching, and numerous pustules bestudding its surfaces; these burst and become ichorous ulcers, accompanied with hot itching pain; subsequently they enlarge under the superincumbent crusts; fresh ones successively appear, and overspread the tumefied eyelid, giving it a dasymatous appearance; the ulcers penetrate deep into the palpebral margins; the ciliary bulbs are lost; and trichiasis or an incurable eutropium remains. Lotions of warm infusion of water-germander, and inunction of the parts with sulphureous, camphorated, and mercurial salves, may form the basis of the local treatment; the general will consist of the internal exhibition of antimony, sulphur, camphor, together with sulphureous baths and frictions of the body, the parts near the eye or those behind the ear, with an antimonial unguent; when the psorophthalmy resists all curative measures, the original cutaneous disease must be reproduced.

Ophthalmia Scrophulosa occupies the eyelids, or anterior part of the eyeball, or the lachrymal sac, or is complicated. An unusual secretion of viscid mucus from the meibomian glands, slight redness and tumefaction of the eyelids, lachrymation, a sense of burning,

and aversion from light, are among its first symptoms; the tears become acrid and excoriate the surrounding parts, which experience an œdematous distention; the conjunctiva now inflames, and is covered with diffused redness; clusters of blood-vessels run concentrically towards the corneal centre, the sclerotica reddens, and pustules appear at the extremity of the vascular clusters, and sometimes change to ulcerous or fungous sores; then ulcers perforate the cornea; the iris falls into the opening, and a staphyloma is produced; sometimes watery vesicles arise, burst, and give place to a corneal hernia; there are painful spasms of the eyelids; and not unfrequently, iritis or total staphyloma of the cornea supervenes. Whoever possesses a panacea for scrofulous disease will here bring it into requisition, as the general treatment of this ophthalmy. Our practice boasts but a precarious efficacy, and we have less expectation of advantage from that which Dr. Weller recommends. As topical remedies, warm poultices, fomentations of hemlock, poppy, or henbane, narcotico-mercurial salves, mucilaginous and slightly astringent eye-washes, with leeches and scarifications, may be opposed to the various phenomena as they obtain.

Dacryoblennorrhœa. When it exhibits manifest symptoms, there are —dryness of the nostril; inflammation of the lachrymal sac; a hard bean-shaped swelling in its site; and this, on being formed, discharges a mucous fluid through the lachrymal points. When it has frequently relapsed or become habitual, it is irremediable; sometimes, it experiences a spontaneous cure; occasionally, it terminates in obliteration, fistula, hernia, or dropsy of the lachrymal sac; and each of these conditions solicit being removed ere its developement is complete.

Ophthalmia Scorbutica. Aversion from light and dislike to glit-

exhibition of our native practice, we have taken occasion, in few instances throughout this long article, to advance comparative opinions. To our readers, therefore—before whom we have adduced ample evidence—we resign the task of estimating the merits and defects of both systems: let them profit by what is useful in either, and let them improve themselves by what is new.

At parting with the translator's elegant and expensive volumes we find pleasure in offering our admiration of the correctness and beauty of their typographical execution. Mr. Chapman has long and justly flourished as the BENSLEY of Strath-Clyde, and we shall not endanger our reputation for bibliosophy and taste, if we pronounce this work of his to be unsurpassed by the best specimens of professional printing which have ever issued from any provincial or metropolitan press.

XI.

Supplemental Review

AND

QUARTERLY PERISCOPE

OF

PRACTICAL MEDICINE, SURGERY, &c. &c.

WITH COMMENTARIES.

Paucis libris immorari et innutriri oportet, si velis aliquid trahere, quod in animo fideliter hæreat. SENECA.

Duo vitia vitanda sunt in cognitionis et scientiæ studio. ***** Alterum est vitium, quod quidam nimis magnam operam conferunt in res obscuras atque difficiles, easdemque non necessarias. CICERO.

Our Periscope becomes every day more necessary. The press, in every country, now groans with periodical publications, while not one paper in ten, communicated through them, is worth the perusal. A principle of *selection* is not only necessary, but a capacity of *discrimination* also; for what are put forth as *interesting facts* are sometimes, we fear, but one de-

gree removed above *ingenious fictions!* Even *truth* comes to us so overwhelmed with words, and *facts* so diluted with ideas, that the labour of picking the pearls of knowledge out of the dunghill of literature is a most tiresome and difficult office. We shall not therefore spread a galaxy of materials before our readers more calculated to dazzle their imaginations than strengthen their judgment;—on the contrary, we shall exercise the utmost discrimination which time and experience have furnished us with, in hopes that our vigils may be useful to our junior brethren at least—while to the sages of the profession we appeal for the correctness of the line which we endeavour to draw between insignificance and worth.

It may be proper, however, to state, that the preceding remarks apply almost exclusively to the foreign journals, and that we shall very seldom notice those papers circulated by our own periodicals—more especially those in our most respected cotemporary of Edinburgh; because the latter journal has a range equal, if not superior to our own, and is always freighted with valuable merchandise. When journals travel in the same channels, it is unnecessary for one to notice the productions of the other, unless for the sake of some practical comment or illustration. It is almost needless to state that these brief analytical sketches are confined to original articles. To review reviews would be to sift water, and gravely present to the public what we caught in the sieve.

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1. *Contusions on the Epigastrium.** We are all familiar, from our

a little. This operation finished, Baron Larrey caused a sheep to be instantly pithed, and the skin, torn reeking from the body, to be enveloped round that of the patient. Round this hide again were thrown warm blankets, in order that the temperature might be kept elevated for some time. In this situation the man remained two hours, at the expiration of which time things were greatly altered for the better. The coldness of the surface was gone—some colour returned to the face—and the patient could give an account of the accident. Nevertheless he passed a very bad night, continually complaining. On the succeeding morning he presented the following symptoms. Epigastrium and abdomen still very painful and tumefied—violent pain in the right shoulder, which induced a suspicion that the liver was injured—the pulse was full, strong, quick—tongue and mouth dry—thirst ardent;—but there was neither hiccup, vomiting, nor headach. The eyes were sunken, and very red—the face pale, and the features sharpened, exhibiting the expression of intense suffering. Warm bath, copious venesection, cupping, warm embrocations, diluents, no food.

The third morning presented little change. The tenderness of the abdomen was still extreme, and the other symptoms continued—and in addition the patient felt as if the right arm was fractured. On this member camphorated oil was rubbed. Emollient fomentations to the abdomen—diluent drink. On the fourth day, although the pain of the epigastrium was acute, yet the patient could bear pressure on the part somewhat better. The other symptoms were rather milder—the bowels were relaxed throughout the complaint—but the pain in the arm principally engrossed the patient's attention. He still insisted that there was a fracture there. A blister to the epigastrium. From this time the symptoms became gradually meliorated, and, by the 12th day, convalescence was assured, and appetite restored. Convalescence continued till the 24th November, when some irregularity determined a relapse, presenting all the symptoms of acute hepatitis, which, however, gave way to local bleedings, blisters, and at last the moxa. He was discharged to duty in the beginning of December.

M. Duponchal thinks that this patient would certainly have been lost had it not been for the extraordinary measure put in force by Baron Larrey, as above related. This was the third successful employment of the same measure by the Baron, at the Military Hospital. The application of a recently excoriated sheep's hide is directed by Ambrose Paré, as the last resource in violent contusions, and where life is menaced by the first effects of the shock. Baron Larrey, in the first volume of his Memoirs and Campaigns, reports the instance of some sailors who were shipwrecked on the coast of Labrador, and picked up on the beach by the Esquimaux Indians, almost dead with cold, and exhausted with fatigue. These hospitable creatures placed the sailors on dried skins, chafed their bodies and limbs with hot aromatic liquors, and then enveloped them in the freshly excoriated hides of animals which they killed for the purpose. The inhabitants of Upper Egypt also are acquainted

with this remedy. In violent, but very circumscribed contusions, they eviscerate a dove or other bird, and apply it warm to the part—but, where the contusion is extensive, they surround the body of the patient with the hide of a sheep just stripped from the body of the animal. In the memorable Russian Campaign, it is said that the most effectual mode of preventing the complete congelation of a limb, was to fold it in the skin of an animal just killed—or even to plunge the member into the reeking entrails of a horse.

We are disposed to agree with the author of the paper before us, that there is something more congenial in a warm, and we might say half-alive substance of this kind, than in any unorganized medium through which a similar degree of temperature could be kept to the part or whole of a human body. Our author proposes the application in question, in cases of repelled eruption, and to a limb after the operation for aneurism. To these propositions we can have no objection.

Case 2. This had not so favourable a termination as the former. On the evening of the 3d May, 1820, N——, a soldier in the Royal Guard, received, while attempting to mount a horse, so violent a kick on the umbilical region as felled him to the earth. He was instantly carried to the military hospital, and the surgeon on duty applied to the abdomen several cupping-glasses with scarificators, which abstracted an abundance of blood. This measure produced but little relief, and the patient passed the night in great anxiety. In the morning, when the surgeon in chief visited the wards, the patient was found lying on his back, the breathing difficult, the heart beating irregularly, the pulse scarcely perceptible, the extremities cold, the lower belly very painful, especially on pressure, or the least motion of the body. More blood was drawn from the abdominal parietes by cupping, and the patient was immersed in a

serous membranes. There is nothing wonderful in the internal rupture without external mark of violence, in cases of blows on the abdomen, as we have often witnessed.

2. *Pestilence.** Dr. Hancock endeavours to steer a middle course between the contagionists and anti-contagionists; and not unreasonably expects to be "exposed to severe animadversions from those who look entirely to the wide ocean of atmospheric impurity, with boundless curiosity on one hand; as well as those who explore with confined research every creek and harbour for the *fomes* of imported contagion on the other." It will perhaps appear, Dr. Hancock thinks, that "neither the comet's glare nor the smuggler's infected bale ought to seduce our attention from the consideration of causes operating perhaps secretly and surely within the sphere of our own institutions."

"And if some, from a restless spirit of generalization, will draw conclusions, beyond a rational induction, let them have some little regard for those, who, not having joined themselves to either side, while they are anxious to discover the general laws that will embrace the contending facts and opinions, hesitate still to settle a single point which the authority of science will not sanction." *Pref.* viii.

We agree with Dr. Hancock, as far as science, or at least scientific discussions, are concerned; but when legislative measures come to be acted on, the "*tutissimus in medio*" maxim is impracticable. As for instance, when a pestilential disease breaks out at Cadiz, how can the Governor of Gibraltar take half measures, and set up a scientific investigation to settle how far quarantine is necessary? He must either shut the gates or leave them wide open—for we may be pretty certain that no jury of medical men would ever come to a *unanimous* decision as to contagion or non-contagion. The Government have long seen this; and, after contemplating the everlasting wranglings, quibblings, contradictions, doubts, vascillations, and abuses, among the faculty, can we wonder at their taking the business entirely out of our hands, and leaving it to the discretion of civil or military commandants, regardless of the learned lucrubrations of professional men?

Dr. Hancock's work is a very able and elaborate critical examination of the principal writings which have appeared at different times on the subject of epidemic and pestilential diseases; and we have no hesitation in saying, that its perusal will be very advantageous, inasmuch as it will help to prepare the way for more correct views and settled opinions on those important and much disputed points; though we are convinced it cannot have any operative influence on

* See page 585 of this number, where this paper should have come in, but was accidentally omitted.

the question of quarantine at the present time. The work is adapted for professional contemplation in the closet—not practical application to legislative enactments. As we have said before, an analytical delineation of the work would be absolutely impossible, without garbling and destroying the whole chain of arguments. The conclusions to which our author's researches and examinations of evidence have come, are shortly as follow.

"We have undoubted testimony, that certain chronic diseases, generally acknowledged to be contagious, originate among us in peculiar habits, under peculiar circumstances.

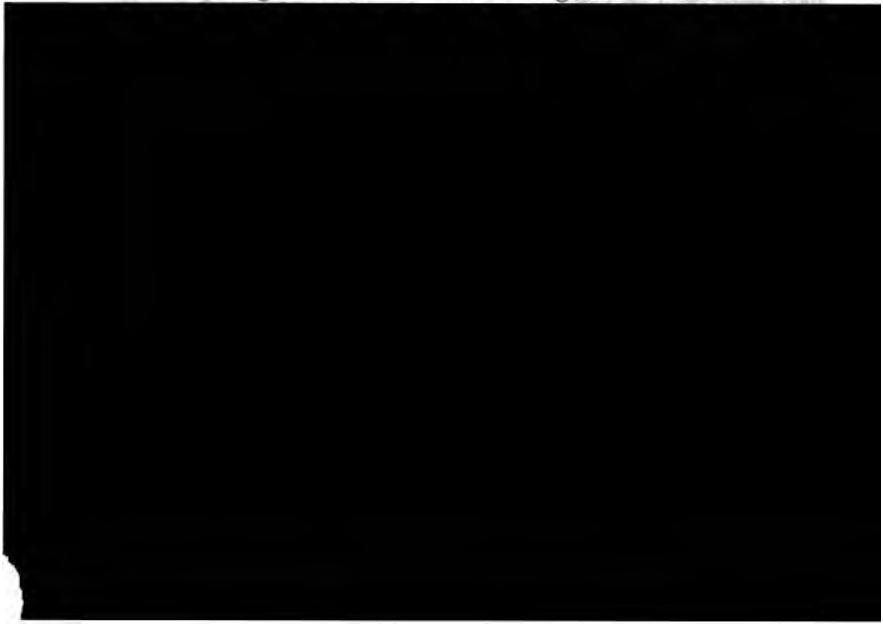
"We have also undoubted testimony, that of the acute diseases, common contagious fever originates at certain times, in peculiar situations.

"It is supported by equal authority, that common contagious fever may be so aggravated by peculiar circumstances, as to assume characters of extraordinary malignity.

"It is no less true, that the highest degree of common contagious fever has on some occasions approached so nearly to the plague, that a certain diagnosis has in vain been attempted.

"Therefore, the probability, indeed the most natural inference is, that the disease called Plague is only the highest degree or a variety of common contagious fever: and as the latter often originates without contagion, so it is inferred may the former; and if in one instance, so it may in many: and where there is a strong predisposition, it is natural to conclude, that morbid effluvia from the diseased to the sound must assist in propagating the mischief, by acting as a powerful exciting cause." 350.

Dr. Hancock has thrown into an appendix some keen criticisms on the writings of Sir B. Faulkener, Dr. Granville, and Mr. Tully. And we were gratified to find that this ingenious author has taken



"But if this be the case, so that the very clothes of the former may convey a poison into the open air, what are we to conclude, when, to the circumstances above noticed, are superadded corrupt food, the influence of sickly seasons, and the morbid progeny of vitiated humours—animal effluvia secreted from the human body in a state of malignant febrile action? Is it credible, if the former position be allowed, that from such a combination of circumstances, miasmata, endowed with a most pestilential contagious power, will not be generated?

"'The most pernicious *infection*, next the Plague,' says Lord Bacon, 'is the *smell* of the jail where prisoners have been long and close and nastily kept;'—'which has some similitude with a man's body, and consists of human flesh or sweat putrefied.'

Nat. Hist. 914."

"As in the former case, which I conceive to be parallel to the often-quoted seizure of three hundred persons at the Oxford Assizes, in 1577, (where we do not learn that a propagation of the disease took place in a purer air) it may be presumed that the mischief would soon cease; so in the latter, we have nothing but the evidence of facts to build upon. And these alone can inform us how a more malignant poison maintains its existence when transplanted to another soil; if a contagion so produced be obedient to the laws of other *contagions;* whether it loses its power by frequent transmission or by lapse of time; whether it selects the victims more nearly resembling those from whom it sprung, or finds others more susceptible; whether it changes its type by change of season; whether it chooses the marsh or the sandy soil, the wooded or the bare, the city or the country, the air of the mountains or of the plains.

"We know but little how the various kinds of contagion differ from each other, and in what various ways infection may take place; but it is an undoubted truth, that as there is in bad morals a tendency to taint our neighbour, so is there in almost all febrile diseases, where filth and vitiated customs and impure air prevail, a peculiar tendency to spread by a species of physical contamination. All the secretions and exhalations seem then to partake of a virulent activity which helps to propagate a similar disease to another, not yet perhaps ready to yield up his strength to the prevailing malady, till he receive a taint from a sick comrade. How else are we to explain the accounts of intermittent fever, of remittent and bilious fevers, of cholera, dysentery, &c. being considered by men of no mean authority at times positively contagions.

"Whether in such secretions and exhalations there be a contagion capable of producing its kind in one predisposed; or whether it be specifically distinct from other *contagions* in more qualities than its less fixable nature, or whether the skin, or lungs, or stomach, receive the first morbid change, or lastly, a more direct impression be made upon the sensorium by the olfactory nerves; it is not likely we shall be able readily to determine. The mode of infection may differ in different diseases. It may differ even in the same; for it is probable the stomach would receive the variolous poison as well

as the lungs and skin. But it is very certain that contagion, if it may be so called, produced and disseminated in the manner above noticed, has such a distinct relation to, and dependence upon a certain state of air, that separate if possible the sick, the mortality will diminish; disperse the sound, the progress will be retarded if not arrested; let the diseased even mix with their fellow-creatures at a small distance who are more favourably situated, the latter will scarcely suffer harm, while the former begin to recover from the very hour of their removal.

"Now facts and observations like these are not adduced for visionary purposes; they are of practical and useful application.

"Shall we therefore be such devoted contagionists that our specific virus must, under all circumstances, propagate its kind; or so confirmed in the opposite opinion, that we can presume there will be no danger in approaching a comrade's couch, as in case of the diseases just mentioned, and inhaling his breath and offensive effluvia, when we ourselves may be on the threshold of a similar disorder?" 257.

The above extract contains sentiments to which we unconditionally subscribe, and which, indeed we have long entertained, and disseminated in this Journal. We must now take leave of Dr. Hancock, while we tender him our professional respect and esteem.

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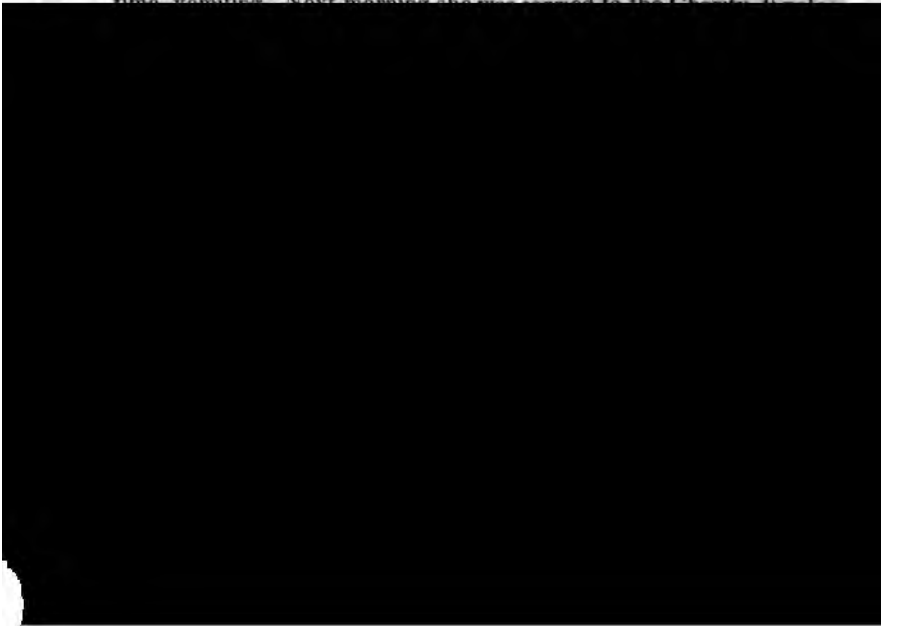
3. *Fatal internal Hemorrhage.** Dr. Newman, of Berlin, relates a curious case of internal hemorrhage, without apparent rupture of vessels. A robust woman, aged 35, was exposed to cold and wet, during menstruation. the catamenial discharge ceased suddenly, and was succeeded by violent pain in the abdomen, and, in a short



with blood-vessels. "The right ovarium was thoroughly converted into a mass resembling coagulated blood."

Without injection, in these cases, it is very difficult to discover the vessels whence a hemorrhage issues, even when they are of considerable size; at the same time, there is no doubt but that great quantities of blood will sometimes be discharged from the mouths of capillaries, by a kind of exhalation, and without any apparent breach of texture. We have noticed this case chiefly for the purpose of keeping up the attention of our younger brethren to those important conversions and irregular actions which occasionally take place when the healthy functions of an organ are abruptly disturbed—and even when a long established morbid process is rudely interfered with. Practitioners in this country are rather apt to despise these considerations.

4. *Tinctura Papaveris Somnif.** Dr. Duncan's work on the tincture of lettuce suggested to Dr. Wilson a trial of tincture of the papaver somniferum, as a substitute for laudanum. He used every part, except the root, taken at the proper time for making the extract, and dried in the shade. His modus is as follows:—Pulv. pap. somnifer. ℥iv. spiritus communis ℔j. digest. for eight days and filter. This medicine he introduced into his practice, under the same principles which govern the administration of tincture of opium, but in double doses. He found it in that proportion as good an anodyne as the foreign opium.

5. *Hydrocephalus.*† It has occurred to Sir Gilbert Blane that the distention of the head and bregma, in hydrocephalus, "is owing to a want of firmness and due resistance in the bony compages of the skull, which consequently yield to that effort of pressure with which the brain, in its growth, acts on the parietes." Reflections of this kind suggested to our author "that mechanical compression of the head might be of use in the cure of hydrocephalus." He accordingly made trial of it in the case of a child thirteen months old, who had a head of preternatural size almost from birth, and where the bregma was unusually large. The child was otherwise rachitic. Sir Gilbert directed the head to be swathed with a roller as tight as possible, short of producing pain or uneasiness. Leeches were applied to the temples, a purgative given every two days. "An immediate amendment took place, which continued so that all complaint was removed in less than three months, except the curvature of the spine." Sir Gilbert, afraid of the old complaint that "there is nothing new under the sun," has searched the records of medicine for parallel

* Dr. Wilson, in Dr. Chapman's Journal, No. 4.
† Sir Gilbert Blane, Med. and Phys. Journal, Oct. 1821

or precedent, but has not found any. The discovery is therefore original. But Sir Gilbert Blane is too good a medical logician to attach any importance to a single case, even were that case most unequivocal. In the present instance, we do not see just grounds for attributing the cure to the bandage. The pressure of a roller, so slight as not to occasion "pain or uneasiness" in an infant's head, must be next to nothing; and where leeches and purgatives were used cotemporaneously, it is needless to say that no conclusion can be safely drawn respecting the share which the bandage might have produced. In a P.S. indeed, Sir Gilbert Blane has wisely limited the application of pressure to "those indications of predisposition consisting in a large head, a tardy closing of the bregma, broad pupils, and rachitic diathesis, or to causes in which the acute stage has been vanquished by evacuations and mercury, &c." Within such restrictions, we can have little objection to the application of a roller to the head, or hope of its producing any beneficial effects there.

P.S. When we had closed the above paper, we read a case in the Edinburgh Journal, of same date, which divides the honour of the discovery between Sir Gilbert Blane and Mr. Hood of Ayton, Berwickshire. Mr. H. tried pressure in precisely the circumstances under which Sir Gilbert recommends it, but without success—namely, after the febrile symptoms and squinting had subsided, the head continuing to increase in size. Mr. Hood now bandaged the head, but this measure brought on fits, and was therefore abandoned. An operation was afterward performed, and six ounces of limpid fluid drawn off by means of a trocar; but the child died.

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6. *Kinina, Cinchonina, Silvabate of Kinina*, &c. Messrs. Pelletier and

follows :—1. Cinchonine united to the kinic acid. 2. A green oily matter. 3. Cinchonic red. 4. Red soluble colouring matter (tannin.) 5. Yellowing matter. 6. Kinate of lime. 7. Gum. 8. Starch. 9. Ligneous matter.

"If we enter into a consideration of these substances, the properties of which have been examined in detail and with care by the authors of the memoir, we shall see that the greater number, viz. the cinchonic red, the oily matter, the gum, the ligneous matter, and the starch, cannot possess any of the medicinal properties of the bark, of which they have not the taste : the greater number of them are even insoluble. The soluble colouring matter or the tannin cannot either be regarded as the active substance in the cinchona, for if the latter owed its virtues to any tanning matter, other barks, very rich in this principle, ought also to have the properties of the cinchona in proportionate energy according to the quantity of tanning matter they contain, but which is contrary to medical experience. There remains the kinate of lime, but this salt when pure has no bitter taste, and is besides insoluble in alcohol. The alcoholic tinctures of bark, therefore, do not contain it, and they are nevertheless febrifuge. Every thing then induces us to believe that the active principle of the bark is the cinchonine ; consequently, it is to this substance and to its salts, that the attention of the physician and his therapeutical researches ought to be directed."—*Philadelph. Journ. p.* 263.

Messrs. Pelletier and Caventon, in analyzing the yellow bark, obtained a substance not crystallizable, and differing from cinchonine in physical and chymical properties. It was a salifiable base, its capacity for acids being different from cinchonine, and its salts more bitter. This substance has been denominated *kinine.*

The analysis of *red* bark presented an extraordinary fact—the simultaneous presence of the cinchonine and the kinine, and each in a greater quantity than is afforded by the pale and yellow bark. The red bark is therefore justly regarded as the best.

Process employed by Mr. Pelletier for procuring the Cinchonine and Kinine.

"Repeated alcoholic tinctures of the bark are first made, and by evaporation the alcoholic extract is obtained. It is in this extract that the cinchonine or the kinine is found, which exists in the Peruvian bark. To obtain the alkaline substance of a suitable purity, the extract is boiled in a certain quantity of water, to which has been added a few drops of hydrochloric (muriatic) acid : the liquor after cooling is filtered—then concentrated, and treated with an excess of magnesia—boiling it for a few minutes, the liquor is again suffered to cool, and then filtered. The precipitate received on the filter is composed of kinine, calcined magnesia, tannin, and cinchonic red. Wash the precipitate with cold water, dry it in a sand bath, then treat it with boiling alcohol, which dissolves the alkali, and leaves the magnesia and the tannin united to the colouring

matter. It remains but to evaporate the alcohol, to obtain the kinine of a superior purity.

"The alkali of the cinchona thus prepared is sometimes impure by an admixture of oily matter—to separate which and purify it, we must dissolve it anew in an acid largely diluted with water, filter again the liquor, and treat it for the last time with magnesia and alcohol, as has been already mentioned." 264.*

The sulphate of kinine has now been employed by a great number of French physicians in fevers of type, and with considerable uniformity of success. M. Double has administered the salt in doses of two grains, morning and evening, which have been sufficient to cause the fever to cease. To prevent a relapse, however, its use was continued some days longer. In other experiments made at the *Hopital de la Charité*, five grains have been given daily in simple quotidian fevers, and continued for eight days. From the very first dose the recurrence of the paroxysms was prevented.

Dr. Bally has reported nine cases of fever to the Royal Academy of Medicine, cured radically by the sulphate of quinine. It appeared to M. Bally, that ten grains given in five doses during the apyrexia, were sufficient to check at once the fever. In autumnal intermittents, however, he conceives that larger doses will be necessary. Two great and obvious advantages of the salt of bark over the powder are, the smallness of the dose, whereby the stomach is saved from nausea or oppression, and the freedom from astringency, it being rather indeed of an aperient than an astringent nature. The dose may be carried to 28 or 30 grains in the 24 hours, which would be equal to about three ounces of the powder. In pernicious fevers where it is desirable, during a short remission, to introduce a large quantity of the cinchona, this new

of seventeen cases of intermittent fevers of different types, cured by the sulphate of kinine. The medicine was prepared by Messrs. Vasse and Colomb, of Brest, who employed a new process, which consisted in boiling the yellow bark in water acidulated with acetic acid, and precipitating the alcaline principle by ammonia. M. Renauldin, M. Hallé, and M. Robiquet have also furnished various notices of this interesting discovery. We trust that what we have here adduced will stimulate our chymists—particularly the *Hall*, to furnish the English practitioners with a medicine which promises to be a very valuable addition to the materia medica.

7. *Epistaxis.** Hæmorrhages are formidable occurrences at all times, and in all places. The application of cold in hæmorrhage from the nose and fauces especially, is no new principle, but it is generally done in a partial or local manner. Dr. Platt having a severe case of epistaxis, in which four pounds of blood were computed to be lost, and the bleeding persisting in spite of all the usual remedies, he directed, in consultation with another physician, Dr. Moorers, the patient to be immersed in a bath of well-water, till rigour was induced. This effect took place in about a minute after the immersion, and continued a few minutes after coming out of the water. The hæmorrhage abated before he left the bath, soon ceased entirely, and did not afterward return. Such is the general sympathy between the capillaries of the skin and those of all other parts of the system, that we believe cold might be more freely used to the whole external surface, in internal hæmorrhages, than it now is. Dr. Bond, of Philadelphia, was in the habit of using the cold bath with success, even in pulmonary hæmorrhage.

8. *Prussic Acid.*† Dr. M'Leod, Physician to the Westminster General Dispensary, has given an extensive trial to the prussic acid in pectoral complaints, but has discontinued its exhibition, "because he was unable to discover any certain indication which it was capable of fulfilling." He did not find any deleterious effects from the remedy, except once, and that was not productive of serious inconvenience. In complaints of a spasmodic nature, such as hooping-cough, Dr. M'Leod believes this acid may be of use—"but the only class of cases in which he feels any real confidence in its exhibition, is dyspepsia, attended with much pain in the stomach, or anomalous feelings about the chest and heart. Indeed he has known it afford relief in structural affections of this organ." A new property, however, of the prussic acid is here developed—namely, the

* Dr. Platt, in Dr. Chapman's Journal, No. 4.

† Dr. M'Leod. Med. and Phys. Journ. 272.

power of ulcerating the gums and producing ptyalism. Dr. Granville appends some remarks to this communication of Dr. M'Leod, and quotes three cases, related by Dr. Nancrede of Philadelphia, in which the said acid appeared to produce considerable benefit in pectoral complaints. We need only add, that Dr. M'Leod's experience confirms the observation of Dr. Elliotson, and also of the reviewer of Dr. Elliotson's work in our 4th number for March last.

9. *Partial Retinal Paralysis.** 1. Læcour, a soldier in the Royal Guard, received, 19th November, 1820, a thrust of a sharp foil between the globe of the right eye, (which was not touched) and the internal parietes of the orbit, the weapon penetrating, by all accounts, three inches or thereabouts. The wound healed, but Læcour, when looking with the right eye alone, could only see the perpendicular half of objects placed in the antero-posterior axis of that eye. As it was with that half of the eye next to the nose, which Læcour saw objects, so when these objects were carried towards the left of the patient, he could see them entire; while, if carried in a contrary direction, he lost sight of them, *in toto*, at a time when they could be distinctly seen with the left eye, if open. Thus it appeared, that the inner or nasal half of the retina was paralytic. In this state he was seen by the members of the *Faculté de Medecine*, three months after the accident occurred. A few weeks subsequently, Læcour committed some excesses, was seized with phrenitis and enteritis at the same time, and died on the fourth day of the disease.

Necrologic Examination. Invaginations of the small intestines and peritoneal inflammation were observed in the abdomen, but the head was the greatest object of research, on account of the retinal para-

tions of dilatation and contraction. This affection disappeared in about two months by means of stimulants to the skin in the neighbourhood of the eye.

10. *Inverted toe-nail.** This troublesome little complaint is not beneath the notice of the surgeon. Dr. Meigs thinks it probable that the disease is generally produced by the practice of cutting at the lateral edge of the nail, with a sharp-pointed penknife. In this process, if the skin be once abraided, a sore is formed, which is perpetually irritated by the pressure of the nail above, till fungous granulations shoot out. As the nail does not yield its position, it appears, by the swelling of the soft parts on one or both sides, to have grown down into the flesh, while, in reality, the edge is no deeper than is natural. After reducing inflammation by the usual means, our author has cured the complaint by the following simple process:—

"Let a small pledget of lint, just large enough to cover all the granulations, and of sufficient thickness to act as a compress, be neatly adjusted, over which a roller of linen three quarters of an inch wide, and eight or ten inches long, is to be applied, having one end previously spread with adhesive plaster. By this method we are enabled, with great ease, to make it act not only on the compress, which will destroy the granulations very rapidly, but, by confining the toe and nail, to prevent even the *small* degree of sliding motion or friction formerly mentioned, thus doing away one principal cause of the disease.

"By pursuing this treatment, the patient will generally recover, even while walking about—and the pain certainly is removed very quickly, for he can now wear a shoe, who before found a tight stocking incommodious." *Philadelphia Journal, p.* 266.

11. *Extract of Opium,*† Majendie thinks that the variable effects of opium on the human frame are owing, in all likelihood, to the opposite principles of which the opium is composed. It is considered therefore, that as those who take morphium do not experience the exciting properties resulting from the aqueous extract of the shops, the process proposed by M. Robiquet should be adopted by apothecaries and chymists, since it well accomplishes the object in view—the separation of narcotine.

M. Robiquet macerates opium, cut into small slices, in cold water, and evaporates the filtered solution to the consistence of thick syrup. This extract is to be repeatedly agitated with ether in a proper vessel.

* Dr. Meigs. Chapman's Philadelphia Journal, No. 4.

† Journal de Pharmacie. Mai, 1821.

The ethereal tincture is then decanted, and submitted to distillation, in order to separate the ether. This operation is repeated as long as crystals of narcotine are obtained. When the ether no longer acts, the solution of opium is evaporated, and the extract prepared. As the same ether may be employed again in the preparation of extract, the process is not so expensive as might be imagined at first sight. It is said that excellent effects have already resulted from the exhibition of this preparation.

12. *Nitrate of Silver.** The *Giornale di Fisica*, tom. xi, contains, at p. 355, a paper by Il C. Sementini, on the use of nitrate of silver in cases of epilepsy. After remarking on the difficulty which occurs in treating such cases, and the good effects which have been observed in using the nitrate of silver, and its superiority in this respect over all other remedies, both as to the effect it produces, and the little inconvenience it causes; the Cavalier states, that to secure the good effects belonging to it, the nitrate of silver should be well triturated with the vegetable extract, in combination with which it is given; that the first doses should be small, and the quantity gradually increased to six or eight grains, or even more, in a day: that the use should not be continued very long together; and that the patient should keep out of the action of light. The latter precaution is necessary, to prevent the discolouration of the skin, which sometimes happens after a long and copious use of this remedy. The precaution, however, only regards avoiding the meridian sun-light.

"It frequently happens, in the use of this medicine, that a species of cutaneous eruption, consisting of small pustules, occurs. This may be regarded as a certain proof of the good effects of the medicine.

other day: by the time that three grains were taken the good effects were evident, and in twenty days more the man was perfectly restored. In another instance, every part of the body and limbs were paralyzed but the head. A small quantity was given at first, but it was increased to eight grains per day, and it effected a cure.

"Three other instances are then adduced, in all of which cures were effected: and the Cavalier expresses his hopes, that, in the hands of other medical men, it will be found as effective and as important as in his own." *Med. Repos. p.* 434.

We have, within these eighteen months, checked epileptic paroxysms in three patients, by nitrate of silver, carried to five grains daily, but not continued longer than two months at one time. We observed no other effect than, first, prolongation of the intervals, and afterward cessation of the paroxysms.

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13. *Arachnitis, Cerebritis, Enteritis.** Picard, a female, 50 years of age, in a state of tranquil dementia, after repeated attacks of paralysis, was seized, on the 7th January, with insensibility, followed by coma. On the 8th, great alteration of the features—strabismus—stupid look—insensibility of the iris—spasmodic contraction of the facial muscles, equally on both sides—mobility of the upper and lower members—pulse hard, frequent, irregular—respiration laborious—tongue yellow, dry, red at the edges—thirst intense—stools involuntary—the patient neither understands nor feels any thing. In the evening a convulsive paroxysm, during which she got up and fell down several times. On the 9th, 10th, 11th, and 12th January, nearly the same symptoms—the evening paroxysms being still very violent. 13th. The lower extremities, hitherto moveable, became stiff, paralytic, and insensible—the teeth and tongue covered with a fuliginous substance. 16th. The right arm is paralytic—in the evening, the left arm in the same state—all the symptoms aggravated. In this deplorable state she continued three days, and then expired.

Dissection. Dura mater strongly adherent to the cranium—tunica arachnoidea raised from the pia mater by a stratum of reddish serosity—the arachnoid itself, throughout its whole extent, thickened and red. The vessels of the pia mater gorged with blood, and not to be detached from the cortical substance beneath. In the substance of the left hemisphere there was a disorganized portion, of a pultaceous, yellow, whitish appearance, almost liquid. This disorganization penetrated to the bottom of the posterior lobe—the middle and anterior were sound. In the right hemisphere there was a nearly similar disorganization. The corpus stratum of this side presented, at its upper portion, a yellowish cicatrix, lined by

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* Pinel fils; Revue Medicale, Juillet, 1821. We request the reader's attention to this case, and the subsequent reflections

a firm membrane, and containing a small brown inorganized substance—doubtless the residuum of an old cerebral hæmorrhage. The cerebellum and spinal marrow were sound.

The heart large—the parietes of the left ventricle an inch in thickness, and the cavity very much diminished—aortic orifice cartilaginous, and the valves ossified. The liver covered with an albuminous exudation. The mucous membrane of the intestinal canal, including the stomach, highly inflamed.

Reflections of M. Pinel. In this case we see three severe inflammations nearly simultaneous—namely, inflammation of the arachnoid; of the brain itself; and of the mucous lining of the alimentary canal. The distinctive symptoms which denoted them during life, were, for the *arachnitis*, the stupor, the somnolency, the contraction of the fascial muscles, without any paralysis. For the *encephalitis*, we had the paralytic affection, first, of the right and afterwards of the left side, indicating an alteration successively in the left and right hemispheres of the brain. For the *muco-enteritis* we have the coating, first yellow and then fuliginous, of the tongue and teeth—and the intense thirst. As symptoms common to all the three inflammations, we have the great alteration in the features; the hardness, frequency, and irregularity of the pulse; the laborious respiration; and the involuntary stools.

The comparative march of the encephalic inflammations is remarkable. The invasion of the arachnitis is sudden, and its symptoms remain stationary during the first four days. On the fifth day a new phenomenon presents itself—a paralytic rigidity (roideur paralytique) of the inferior extremities, announcing an affection of the cerebral pulp itself, particularly towards its superior portion. On the ninth day the immobility of the *right* arm indicated a deeper lesion of the *left* hemisphere, the paralysis gaining the *left* arm

brane of the stomach and intestines, ending in decided phlogosis of that membrane. This effect, M. Pinel justly observes, is a very frequent one consequent on diseases of the heart.*

M. Pinel, who has the range of the Salpetriere for observation, relates three other important cases, for which we have not room in this number of our Review. Our readers are all aware that we are no advocates for useless refinements and hair-breadth distinctions; but we believe there are many men in our profession, high in rank, and consequently powerful in influence or example, who set their faces against all such investigations as M. Pinel and many others are now pursuing. But we shall not cease to remonstrate and rebel against those Goths and Vandals of medical science, who would stifle in embryo all attempts at clearing away some of the many doubts and uncertainties which beset us on all sides, and draw on us the appellation of *conjectural* actors. If we do not advance, and that with vigour, we must retrograde. But we hope there is too much zeal afloat, and too much intellect in operation among us, to allow of our pausing in the arduous and praiseworthy spirit of investigation which characterizes the age we live in.

14. *Inflammation of the Heart fatal in ten hours.*† A man, 29 years of age, presented himself to Dr. Ulrich, complaining of a tightness of the chest, and feeling as if flatus mounted up into the thorax. At the same time, he had palpitation of the heart. As he was a man of very sedentary habits, often sitting up whole nights in

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* M. Pinel here makes a short physiological digression, in which he expresses a conviction that, after all the experiments on the circulation, the heart is the main, if not the only, organ, which moves the blood under ordinary circumstances. Pathology, he thinks, has here thrown light on physiology. We shall quote the concluding passage in the author's own words.

"Nous voyons, en effet, que le sang stagne dans les capillaires, soit lorsque la circulation est trop active, comme dans les hypertrophies des ventricules du cœur avec agrandissement de leurs cavités; soit lorsque, ralenti dans son cours, le sang n'a pas assez de force pour parvenir jusqu'aux extrémités artérielles, comme on l'observe dans les hypertrophies des ventricules avec rétrécissement de leurs cavités. Or, que la circulation soit trop active ou ne le soit pas assez, il y a stase du sang. N'est-ill pas évident alors que le cœur est l'organe essentiel et primitif de la circulation capillaire, puisque s'il envoie trop de sang aux extrémités artérielles, l'accumulation du fluide en comprime la masse et empêche sa circulation, et que s'il n'en envoie pas assez, le fluide ne reçoit pas une impulsion suffisante à sa circulation pleine et entière: d'où il résulte stagnation du sang dans les deux cas. Et si le cœur est en effet le principal agent de la circulation capillaire, il doit nécessairement avoir aussi une grande influence sur le mouvement du sang veineux."—*Revue Medicale*, p. 310.

† Dr. Ulrich: Journ. Comp. des Sciences Medicales. Sept. 1821

study, Dr. Ulrich recommended him to take exercise, and prescribed some pills to keep the bowels free. Two months afterward, Dr. U. observed that his countenance was become yellow, and he now complained of an indescribable sensation in the chest, but had no pain, nor was his health perceptibly altered. He was a man of eccentric character, but possessing much talent and genius. On the 6th October, 1820, at five o'clock in the afternoon, he came to Dr. U. begging relief for most violent pains which he experienced in his chest—pains which were of quite a different nature, he observed, from those strange sensations he before alluded to. He had eaten his dinner, with appetite, at three o'clock, and the pains had progressively increased from that time till five. He could assign no cause, unless it was that of having washed his chest with cold water in the morning. The heart did not beat very inordinately—the pulse was soft, and not more frequent than in health. The pain extended from the region of the heart throughout the chest. The skin was cool, nor was there any appearance of pyrexia. The abdomen was soft, and void of tenderness on pressure. The patient had had a stool in the morning. His countenance was not expressive of any anxiety. He conversed calmly on the complaint, and asked Dr. U. if he did not think that blood-letting would be proper. The disease appeared to Dr. Ulrich to be spasmodic rather than inflammatory, and therefore he determined to administer a gentle diaphoretic, and wait the further developement of the complaint. About eight o'clock in the evening, Dr. U. called on the patient, and found him pacing his room, still complaining of considerable pains, although they were somewhat mitigated. The physician and patient again conversed on indifferent subjects. The pulse, action of the heart, temperature, and countenance, were the same as three hours before. Even now Dr. Ulrich had no sus-

state became so much worse that Dr. U. saw the business was up, and that neither bleeding nor any other measure would save him. The respiration became stertorous—the extremities cold—the pulse extinct—forehead covered with cold sweat—and death closed the scene in ten minutes after he swallowed the first powder—ten hours from the apparent invasion of the disease, and seven after Dr. U. was consulted. Dr. U. on inquiry, found that this gentleman was greatly embarrassed in his circumstances, and very unhappy in his mind for some time past; and on reviewing the history and termination of the case, he became convinced that disease of the heart had existed long before the present time; but that acute inflammation had probably lately supervened. This is what Dr. U. now tells us. But we may remark, *en passant*, that some men make wonderfully acute *prognoses* in the cases they relate, *after* dissection has set things in a proper point of view. If such was Dr. Ulrich's natural sagacity, we lament that he did not exercise it, except in the short period between death and dissection.

Necrotomy. Heart not adherent to the pericardium. About six ounces of clear yellow liquid in the cavity of the pericardium. The heart appeared somewhat more voluminous than natural, but this was owing to the state of the large vessels that rose from its cavities. The anterior surface of the heart was unequivocally inflamed, with large red spots, and abundance of coagulable lymph scattered around it. The exterior of the root of the aorta was red, and covered with a slight layer of coagulable lymph. It was enlarged to nearly double its calibre, and several aneurismal tumours projected from its sides, but all communicating with the canal of the artery. Two of these pressed upon the under surface of the heart, and gave it the appearance of being amplified in volume. The interior of the root and arch of the aorta was of a crimson colour. There were some other morbid appearances about the heart, but not worth notice. There was some effusion in both sides of of the chest, particularly the right side, where it amounted to thirteen ounces.

We think the above case may prove an instructive lesson to our junior brethren—nay, to some of those whose heads are ready to crack with experience, but who, some how or other, do occasionally contrive to get on the wrong side of a case, in spite of all their boasted *tact*. From the days of Hippocrates the pulse has been pronounced the most fallacious guide, and yet it every day misleads practitioners. No one diagnostic mark can be trusted to in diseases. We must look to the whole tenor of the patient's feelings and functions—and if there is much suffering, we ought to suspect that some important organ is labouring, though silently, and ought to be relieved if possible, or guarded from danger by those well-known means which, even if wrongly used, cannot do much harm to spasm—but, if neglected, bring ruin on the part where inflammation is ravaging unseen.

15. *Sarcocele.* M. Maunoir of Geneva has recently recommended to the surgical profession a mode of treating sarcocele, without extirpation of the testicle. This consists in cutting off the main current of blood from the organ, by tying the spermatic arteries. He recommends these vessels to be tied close up to the ring, so as to interrupt the circulation through as many of the small branches as possible. Previous to an operation, however, it is necessary to distinguish sarcocele from medullary fungus of the testicle, with which, he thinks, it is too often confounded.

"In sarcocele," says he, "the tumour is generally more uniform, and more firm; its volume does not exceed twice or thrice that of the healthy testicle; the spermatic cord remains unaffected. In the medullary fungus of the testicle, the organ usually acquires a more considerable size; the body of the testicle and the epididymis becomes soft, and affords a deceptive sensation of fluctuation, which has sometimes caused the case to be mistaken for hydrocele. If the disease is far advanced, the scrotum changes colour, becomes livid, and at length ulcerates. When this happens, the chord commonly participates in the tumefaction, and in the deceptive fluctuation above mentioned. The swelling of the chord continues even up to the abdominal ring, and the abdomen cannot be pressed without causing great pain in the loins." *Foreign Journal, p.* 560.

M. Maunoir put this proposal to the test in two cases. In one, the spermatic artery was tied on the 8th of June, 1820, and divided below the ligature. By the 4th July, an evident diminution had taken place in the tumour. On the 20th August the patient quitted the hospital, his testicle being without pain, and not larger than the sound one. Hydrocele was combined with enlargement of the testicle in this case, and the water had been twelve times evacuated,

the opposite patella. The insertion of the vastus externus into the external edge was the only tendinous attachment which was much stretched. I reduced the dislocation suddenly, but with some difficulty, by bending the thigh very much on the pelvis, drawing downwards the flexor muscles as much as possible, and by forcibly raising the bone at the same time that I turned it in its natural direction. Some inflammation in the joint followed, but was arrested by the usual means." 563.

The following case related by M. Combette, in the JOURNAL GENERALE DE MEDECINE, may be here introduced with propriety.

M. C. thirty years old, dislocated his patella in wrestling by a motion which he could not describe. There was a projection of the knee; the leg was permanently extended. The patella rested completely on its edge, its articular surface being turned outward. The internal half of its cirumference was fixed in the articular groove formed by the elevation of the sides of the anterior part of the condyles of the femur.

"Reduction.—An assistant raised the thigh, and with one hand M. Combette bent the leg on the thigh, while, with the other, he turned the patella from within outward. The reduction was effected in an instant, and was followed by slight swelling and weakness. Six months afterward, in dancing, the same accident happened in a less complete degree; for the patient was able to replace the bone himself. The joint is perfectly well formed." 563.

17. *Arteritis and Phlebitis.* Dr. S. Sprengel relates the following curious and interesting case of inflammation of veins and arteries from a wound, in the *Journal Complementaire des Sciences Medicales*:—"A young man, lately embarked in the military service, was sent to the hospital for a wound in the right-hand, which he said was accidentally produced by a hatchet, but which was very evidently the result of design. Be that as it may, the wound was properly dressed, and every thing went on well for the first two days; but in the evening of the second day, a violent symptomatic fever was kindled, which, though mitigated for a time by a copious bleeding, came on again with more intensity than ever, accompanied by gastric symptoms. An emetic relieved the latter. The wound now suppurated kindly, and on the fifth day there was every appearance of a speedy cure. His companions at this time persuaded him that he would be severely punished for the attempt at maiming himself, which, joined to the chagrin of being disappointed in his hopes of discharge from the military service, threw him into a low nervous fever, while an erysipelatous inflammation began to spread over the back of the wounded hand, and from that up the arm, in the direction of the great vessels. The fever now assumed the typhoid form, although the wound itself preserved a healthy appearance, and never ceased to discharge good pus. An abscess formed on the wrist and

was opened, when a great quantity of serosanguineous pus was discharged. On the 18th November, a great hemorrhage took place from the wound, without any apparent cause. This was soon stopped. The process of suppuration was now arrested, and the wound looked dry and shrivelled. The patient died on the 20th November, eighteen days from the infliction of the wound.

Dissection. Nothing remarkable in any of the splanchnic cavities. Sinuses and abscesses were found along the arm. The sheath of the radial nerve was a little inflamed, the radial and ulnar arteries, from the wrist to the middle of the fore-arm being filled with pus. The lining coat of these vessels was thickened, corroded, and covered with coagulable lymph. The brachial, axillary, and subclavian arteries were sound. The veins, on the lower part of the fore-arm, presented the same phlogosed appearances as the arteries. On the clavicle an abscess was found filled with ichorous pus, the bone being denuded of its periosteum, and carious. Yet there was no affection of the vessels in the vicinity of this abscess. No other morbid appearance was found in any part of the body."

The above case offers a good example of the effects of moral emotions over the physical structure of our frames.

18, *Ruptured Perineum, &c. in Parturition.* This is a very awkward accident, and will sometimes occur where the ablest accoucheurs are employed. In our own practice, these ruptures always happened where the perineum was well supported, and we never recollect seeing an instance of it where women were delivered before the arrival of the doctor, (no uncommon incident,) and consequently where the perineum was left to its fate. We do not therefore agree

ment soon appeared. The fever subsided, and on the 8th day the compresses were removed. Two days afterward the ligature was also removed, the cicatrization being complete. In a month the patient was considered as perfectly well.

19. *A Sketch of Congestive Fever—drawn nearly two centuries ago.*

"Sæpo vero medici decipiuntur a putridarum febrium miti ac leni calore in cute observato. Etenim cum natura opprimitur ac fere humorum multitudine suffocatur, quo color nativus alioquin ardens, sese exinde intus contineat, nec foras moveatur, partes corporis exteriores parum calent. Has febres aliqui fumantes magis quam suffocantes appellant, quod in ipsis non flamma, seu ardor calorve, foras per cutis meatus moveatur, sed fumida potius neque ita urens exhalatio, seu fumus, uti in igne lignorum viridium vel temere congestorum copia obruto, et suffocato pro flamma fumum excitari observamus, aut ubi ita natura deficit, ut nisi ex putrefactis succis calor accensus non multus sit; neque ad cutem copiose perveniat."—*Prosper Alpinus, de Præsagienda Vita et Morte Ægrot. Cap.* xiv.

"Repente mutari ad frigidum corpora, nisi accessione id fiat; semper malum:—denique maligni humoris viscus nobile lacessentis, vel vehementis inflammationis actione intus totum collectum esse significat:"—'Et hinc est quod in morbo summe maligno hujusmodi mutationes, Galen in Prorrhet. dixit esse lethales, easque extinctione naturalis caliditatis fieri.' Pulsus summe inæqualis, prælanquidique contracti. Resolutum conjicimus, si prius resolutionis aliqua causa præcesserit, uti febris vehemens, assidua, vigiliæ item assiduæ dolores ingentes, immodicæque vacuones cum sanguinis tum humorum."—*Prosp. A. Ch.* xvi.

What Prosper Alpinus faintly sketched, Drs. Jackson and Armstrong have now distinctly painted. *P.*

From the great length of several of the analytical articles in this number of the Journal, our Periscope has been somewhat less copious than we intended, notwithstanding the exertion which we have made in compressing the matter and setting it in small type. In this, as in every other number of the Journal, (except No. 1,) we have considerably exceeded the regular limits of the work—often at the extra expense of ten or fifteen pounds sterling. The liberal, we might perhaps say, unprecedented encouragement which the Journal has experienced from the professional public, demands a suitable return on ours; and we venture to affirm, that no labour or expense will be spared in rendering the work equivalent to the object for which it was instituted—the more uniform diffusion of professional information through all classes of medical society.

XIV.

EXTRA LIMITES.

Dr. Reeder's Reply to the Review of his Work in the 6th Number of this Journal.

I think it proper to observe, regarding what was advanced relative to my Treatise on Diseases of the Heart in the last number of the Medico-Chirurgical Journal, that I consider the review of it imperfect, the analytical account garbled, and the critical remarks illiberal and unjustifiable in their whole tenor. It will obviously appear to every one who has merely glanced over the work, that the review of it is extremely imperfect: in it, for example, there are first a few vague observations on that part of the performance which treats on Inflammation of the Heart; next occur a few cursory remarks on Angina Pectoris, but no mention whatever is made of the views I have taken of that disease, in regard to its various causes, diagnosis, nature, &c. which altogether are very different from those of any preceding writer. The other divisions of the work are also passed over in a manner equally slight. The analytical account, too, is entirely garbled, inasmuch as the annotations are made upon the most unimportant parts of the treatise, and are also calculated to misrepresent. And the illiberal nature of the critical remarks is evinced from beginning to end, in proof of which it may suffice to mention,

ful information which has been published on the Continent. It is true, I have not taken any notice of the stethescope, invented by Laennec, nor of the inane wonders that have been achieved by it; —an instrument calculated perhaps to amuse, for a short time, those who pursue novelty with such extraordinary avidity; but which, with the more sober-minded, is, I am disposed to surmise, destined, ere long, to pass through the ordeal of experiment into oblivion.

HENRY REEDER.

42, St. Thomas's Street, Southwark.

☞ There is room for comment on Dr. Reeder's remonstrance: but we hold it very ungenerous to counteract the effect of an author's reply by any observations at the time the reply is published, unless the subject matter requires immediate notice.—We hope Dr. Reeder will be cooler after this evolution of caloric.

XV.

BIBLIOGRAPHICAL RECORD;

OR

Works received for Review within the Quarter.

1. A MANUAL for the STUDENT of ANATOMY; containing rules for displaying the structure of the body, so as to exhibit the elementary views of anatomy, and their application to pathology and surgery. By JOHN SHAW; being an outline of the demonstrations delivered by him to the students in the school of Great Windmill Street. One pocket volume, 8vo. pp. 342 of small type, with plates. London, September, 1821.

2. Lectures on the Structure and Physiology of the Male Urinary and Genital Organs of the Human Body, and on the Nature and Treatment of their Diseases; delivered before the Royal College of Surgeons in London, in the summer of 1821. By JAMES WILSON, F. R. S. Professor of Anatomy and Surgery to the College; Lecturer on Anatomy and Surgery at the Hunterian School in Great Windmill Street, &c. &c. One vol. 8vo. pp. 438, and three plates. London, September, 1821.

3. A Treatise on Cataract, intended to determine the operations required by different forms of that disease, on physiological principles. By PHILIP CHILWELL DE LA GARDE, Member of the Royal College of Surgeons, &c. One vol. 8vo. pp. 213. London, 1821.

4. Advice to the Young Mother, in the Management of herself and Infant. By a Member of the Royal College of Surgeons. Small 8vo. pp. 112. London, 1821.

In common with the profession at large, we are adverse to medical works addressed exclusively to the popular reader. We seldom take the trouble to look into them, much less peruse them. The above little work was sent to us by a lady, whose literary lucubrations have been read and admired wherever the English language is understood. We consequently examined the publication, and we are constrained to say, that the work is too good for those to whom it is addressed; nor have we seen a single objectionable word or expression in it. We are totally unacquainted with the author's name.

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5. Researches Anatomico-Pathologiques sur l'Encephale, et ses Dependances. *Lettre troisieme*, octavo. Paris, 1821.

Through M. Breschet.

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6. Revue Medicale, Historique, et Philosophique. Juillet et Aout 1821.

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7. On the Nature, Symptoms, and Treatment of the different Species of Amaurosis, or Gutta Serena; illustrated by cases. By JOHN STEVENSON, Esq. Surgeon-Oculist and Aurist to His Royal Highness the Duke of York, &c. &c. One vol. 8vo. pp. 277. London, Oct. 1821.

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8. On the Nature and History of the Marsh Poison. By WILLIAM FERGUSON, M. D. F.R.S.E. Inspector of Army Hospitals. (From the Transactions of the Royal Society of Edinburgh.) Quarto, pp. 29. Edinb. 1821.

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9. The Influence of Tropical Climates on European Constitutions; being

11. Rapports et Consultation de Medecine Legale, recueillis et publiés Par. J. RISTELHUEBER, Docteur en Medecine, Medecin en Chef à l'Hopital Civil, &c. &c. a Strasbourg. Octavo, pp. 172. Paris, October, 1821.

☞ *Transmitted by M. Breschet.*

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12. Dissertatio Medica Inauguralis de Phthiseos Natura; Auctore JACOBO BLACK. Octavo, pp. 32. Glasguæ, 1821.

☞ There are some ingenious speculations in Dr. Black's Thesis, respecting the different sanguineous capacities of the two circulations, pulmonic and aortic, and the consequent loss of equilibrium which occasionally takes place. We shall probably have an opportunity, on a future occasion, of making more particular allusion to this very respectable tentamen medicum.

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13. Philadelphia Journal of the Medical and Physical Sciences. No. 4, August, 1821.

This number contains—1. an able paper on yellow fever, by Dr. S. Jackson, in which the contagionists on both sides of the Atlantic are warmly handled—especially Sir Gilbert Blane in this country. 2. An historical account of syphilis, translated from the French. 3. On the generation of animal heat. 4. On cinchonine and kinine. 5. On inverted toe-nail. 6. On the application of atmospheric air to parts of the body not naturally exposed thereto. 7. On the devastation of the gums. 8. On the modus operandi of medicines, by Dr. Chapman. 9. On the tincture of poppy made from the entire plant, as a substitute for laudanum. The second department contains eight cases. The third contains five reviews. We shall notice several articles in the work, as soon as possible.

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14. Considerations sur la Fievre Jaune. Par le BARON LARREY, Chirurgien en Chef de l'Hopital de la Garde, &c. &c. Octavo, pp. 32. Paris, 1821.

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15. A brief View of the Yellow Fever, as it appeared in Andalusia during the Epidemic of 1820: together with the mode of treatment adopted, and an account of the appearances *on dissection*. To which is prefixed, a short topographical sketch of the country. By THOMAS O'HALLORON, Esq. Octavo, pp. 171. London, November 1, 1821.

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16. Journal of Popular Medicine, Nos. 8, 9, and 10. By CHARLES HADEN, Surgeon to the Chelsea and Brompton Dispensary, &c.

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17. A Treatise on the Diseases of the Chest, in which they are described, according to their anatomical characters, and their diagnosis established on a new principle, by means of acoustic instruments; with plates. Translated from the French of R. T. H. LAENNEC, M. D. with a preface and notes by JOHN FORBES, M. D. Physician to the Penzance Dispensary, Secretary of the Royal Geological Society of Cornwall, &c. &c. One vol. 8vo. pp. 437, and eight copper plates. London, 1821.

In the 7th number of our Quarterly Series, for January 1820, we presented our readers with an analysis of the original work, of which Dr. Forbes has now given an excellent condensed translation, enriched with valuable

notes, and illustrated by expressive plates. Time, and the general voice of the best judges in the profession, have confirmed what we said two years ago, namely, that Laennec's work was "one of the most valuable additions to our pathological knowledge of thoracic diseases which the present age has produced." We here again repeat our thorough conviction, "that those who neglect to possess themselves of the work, either in the original or translation, inflict a deep wound on their best interests." We cannot, indeed, too strongly exhort our brethren to study this invaluable repository of unwearied observation and indefatigable researches into the pathology of the most important division of the human body.

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18. Dissertatio Medica Inauguralis de Cordis Palpitatione. Auctore CAROLO LOCOCK, M. D. Edinburgh, 1821.

☞ Dr. Locock dedicates this very respectable thesis to his friend and former preceptor, Mr. Brodie—"amico atque præceptori, publicis privatisque virtutibus illustri"—in grateful remembrance of the instruction and kindness received from that excellent and amiable surgeon. We were much pleased with the perusal of this thesis.

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19. Observations on those Diseases of Females which are attended by Discharges. Illustrated by copper plates of the Diseases. By CHARLES MANSFIELD CLARKE, Member of the Royal College of Surgeons, London. Royal 8vo. pp. 243, five plates. London, Longman and Co. 1821.

☞ *This important work in our next.*

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20. Notes on the Medical Topography of the Interior of Ceylon; and on the Health of the Troops employed in the Kandyan Provinces, during the Years 1815, 1816, 1817, 1818, 1819, and 1820: with brief Remarks on the prevailing Diseases. By HENRY MARSHALL, Surgeon to the Forces. Octavo pp. 200. London, 1821.

"There are two modes of establishing our reputation;—to be praised by honest men, and to be abused by rogues. It is best, however, to secure the *former*, because it will be invariably accompanied by the *latter*. His calumniation is not only the greatest benefit a rogue can confer upon us, but it is also the only service that he will perform for nothing."

Mr. Mogridge's communication respecting the mode of managing fractured patella, came to hand, but as we cannot break our plan by introducing original communications, we have transmitted the paper to one of our cotemporaries for publication. After its appearance in the proper place, it will be noticed in our Quarterly Periscope.

It is quite unnecessary for us to insert Argus's "report" of a pretended medical society, and the issue of a Journal from such a source. It is only another "MEDICAL BOARD"—and "by their fruits ye shall know them."

The excellent discourse on the evidences of revealed religion, by the Rev. Mr. Channing, transmitted to us from Boston, in America, in consequence of our review of Pring on the "Laws of Organic Life," has been received. The request that it may be transmitted to Mr. Pring, after perusing it, has been complied with.

MISCELLANIES.

We believe it is the intention of the members of the MEDICO-CHIRURGICAL SOCIETY of London, to dine together in the month of January, 1822. The number, respectability, and influence of its members will, in all probability, cause this meeting to present the greatest assemblage of rank, talent, and learning in the profession, that was ever witnessed at one time or place. If, on such an occasion, the "feast of reason and the flow of soul" do not predominate, it will be wondrous strange. We hope our worthy president, Dr. Cooke, will be able to take the chair. No man is better qualified to fill it, by a union of the erudition of the scholar, the dignity of the philosopher, and the refined manners of the gentleman.

Medico-Chirurgical Society of Edinburgh—It is with pleasure that we announce the formation of a Medico-Chirurgical Society in Edinburgh. The society is formed upon the model of the Medico-Chirurgical Society of London; and has in view precisely similar objects. Most of the medical Professors in the university, and many of the most respectable Practitioners in the city, have co-operated in its formation. Dr. Duncan, Sen. has been elected its first president. Its sittings commence in the approa[illegible] ter session.

In addition to ordinary and honorary members, provision is made for the admission of corresponding members; and it is hoped that many in almost every part of the world, and such especially as retain a grateful recollection of the advantages they derived from their alma mater, will not be backward in supplying interesting communications.

Communications may be transmitted to the president of the society, or to either of the secretaries, according to the following addresses:

Dr. W. P. Alison, 44 Heriot-Row, Edinburgh.
Dr. Robt. Hamilton, 3 Northumberland-Street, Edinburgh.

A physician, a graduate of the University of Edinburgh, and Member of the Royal College of Surgeons in London, residing in a populous country town, has a vacancy in his family for a young gentleman who may have finished his apprenticeship, and intends taking his degree in one of the Universities. He will have ample opportunity of practice in a Public Institution, and recourse to a good medical library. It will be required of him to devote a certain portion of each day to his professional studies, on which he will have to undergo regular examinations. He will be treated as one of the family. Terms, 150 guineas per annum.

For further particulars apply to Dr. Johnson, No. 58, Spring Gardens.

MEDICAL PUPIL.

A physician attached to several public institutions is desirous of accommodating a respectable house pupil. The terms and peculiar advantages of the residence here proposed may be known by reference to Dr. James Johnson.

THE

Medico-Chirurgical Review,

AND

JOURNAL OF MEDICAL SCIENCE.

(Analytical Series.)

"Nec Aranearum textus ideò melior, quia ex se fila tingunt; nec noster vilior, quia ex alienis lubamus, ut apes."

VOL. II] MARCH 1, 1822. [No. 8.

I.

ARACHNOID INFLAMMATION, CEREBRAL AND SPINAL.

Recherches sur l'Inflammation de l'Arachnoide, Cerebrale, et Spinale; ou Histoire Theorique et Pratique de l'Arachnitis. Ouvrage fait conjointement par PARENT-DUCHATELET, M. D. Medecin en Chef de la 4e Legion de la Garde Nationale, &c. et L. MARTINET, M. D. &c. &c. One large volume, 8vo. pp. 612. Paris, 1821.

——— quid nobis certius ipsis
Sensibus esse potest, quo vera ac falsa notemus.—LUCRET.

THAT there cannot be a more important subject of investigation than that which occupies the volume before us, must be admitted by every one. The brain, as the organ which unites our moral and physical natures, exercises unbounded sway over our mental and corporeal faculties and functions; while its slightest deviations from health involve derangements of numerous other organs and structures in the living machine. These peculiarities of the sensorium, its appendages, and its coverings, render an investigation of their disorders so extremely difficult and perplexing, that nothing but the most ardent, unwearied, and systematic course of clinical observation and pathological research can be at all expected to throw light on the obscurity of the subject. Such clinical records and necrologic examinations have not been systematically pursued in this country; for the writings of Dr. Abercrombie and a few others are confessedly sketches, or contributions towards a more regular work on the important class of diseases now under consideration. It is a rare

thing, in this country, to see two men uniting to watch and record the phenomena of disease at the bed-side, and minutely examine, after death, the corresponding traces of disorganization. Such a process, especially when carried on in a great public hospital, under the eye of the medical officers and visiters, acquires an authenticity of inestimable value, and which places it beyond the humiliating sarcasm of Cullen, who observes—"that there are more false *facts* than false *theories* in medicine."

If Routinism and Apathy should raise their voices—and doubtless they will—against the arduous, or, in their apprehension, fruitless attempt to discriminate the diseases of structures so contiguous as the membranes and substance of the brain, we must not, on that account, be turned from the path of investigation which Reason, as well as experience of the past, points out as the only one likely to lead us from darkness to light—from doubt to certainty, or at least probability—from empyricism to science. Let it be remembered also, that as it is by minutely studying every *part*, we can hope to become intimately acquainted with the *whole*; so a rigid and careful examination of the disorders affecting each particular tissue enveloping the cerebral mass, must, of necessity, improve our general knowledge of encephalic disease, even when we are unable to determine the precise seat of lesion in the living body. On this account we must entreat the patient attention of our readers to the following analysis, which we trust and hope will amply repay the perusal. The extent of the article must be imputed to the size of the

STITUTE, is a certain passport to public attention; and, without farther preface, we shall proceed to an analysis of the work.

Our authors observe that the diseases to which the cerebral envelopes (dura mater, arachnoid, and pia mater) are subject, may be conveniently classed under the following heads: —1. Congestions. 2. Exhalations, serous or sanguineous. 3. Hæmorrhages. 4. Inflammations. 5. Organic affections, or changes of structure. Where the cerebral pulp itself is affected, "exhalations" must be omitted, and two other heads added—"commotion," and "nervous affections." The present inquiry of our author's is limited to the 4th head, viz. inflammation, and that of the middle envelope, or tunica arachnoides. Their reasons for this preference are, the obscurity in which arachnitis has hitherto been involved—the frequency and danger of the disease—the difficulty of the diagnosis—and, above all, the light which it throws on other cerebral affections.

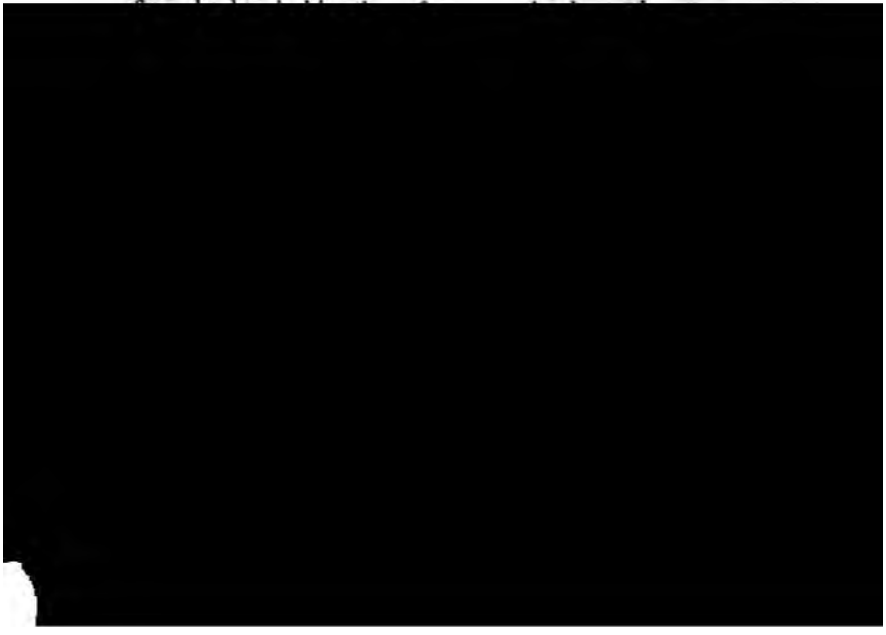
I. The first chapter presents a neat, but very succinct sketch of the anatomy and physiology of the arachnoid,* cerebral and spinal. Our readers are aware that it is a delicate transparent membrane, closely in contact with the pia mater, and reflected, according to Bichat and other French anatomists, over the internal surface of the dura mater. Since Bichat's time, it is considered as passing in, to form a lining for all the ventricles of the cerebrum and cerebellum. It is constantly lubricated by a fine rosy exhalation, and is decidedly a *serous* membrane, performing the same functions in the head as the membrane investing the heart, lungs, and abdominal viscera, perform in their respective situations. In a healthy state it is insensible to touch or torture; but, when inflamed, it acquires a high degree of morbid sensibility —a change to which we must attribute the headach, more or less violent, but invariably attendant on arachnitis, forming its special character, and, in this respect, meriting the most profound attention of the practitioner. In its pathological as well as physical character, it harmonizes with the other serous membranes of the body. It is inflamed by the same causes which inflame them—and, like them, frequently throws out aqueous collections, or forms adhesions where the surfaces were before free. Finally, like the pleura and peritoneum, its mode of suppuration is by an effusion of whitish or sero-albuminous fluid, sometimes forming layers of false membrane, &c.

* For the sake of brevity, we shall use "*Arachnoid*" as a substantive throughout this article. It is so used by our authors.

II. The second chapter is on the important subjects of etiology and history of cerebral arachnitis.* Among the primary, most common, and most frequent causes of the disease, are percussions of the head,† insolation, organic lesions of the brain itself, apoplectic disposition, depressing passions of a moral nature. Among the secondary causes, in point of frequency or importance, are metastases of different kinds, suppression of habitual discharges, the use of strong drinks, and the common causes of other internal phlegmasiæ, as of pleuritis, gastritis, &c.

Our authors attach great importance to those percussions or commotions, which, though far too slight to produce fracture of the cranium, are yet capable of injuring the tender structure of the arachnoid.‡ It is curious that this cause determines the suppurative process in the arachnoid more frequently than any other cause. With the exception of two cases, the suppurative process was established in every instance where arachnitis resulted from external violence. To *insolation*, our authors were able to distinctly trace only two cases, probably because their patients were inhabitants of a great city, and little exposed to the direct rays of the sun. Doubtless in the country—and especially in warm countries—this cause is a very frequent one.

Our authors exhibit tabular views of the causes, sexes, ages, duration, periods, &c. of which we can take but a cursory notice. Thus of 116 cases§ of arachnitis, 21 were from percussion, two from insolation, two from tubercles of the brain, ten from depressing passions, six from metastasis, one



under 14 years of age—44 between the age of 15 and 30 years —38 between 31 and 60 years of age—five between 61 and 80 The ordinary duration of arachnitis is from seven to eighteen days Death, however, sometimes happens on the third or fourth day, and patients rarely pass the twenty-fifth. Three cases only were protracted to the thirtieth day.

The course of arachnitis presented to our indefatigable and zealous observers three periods sufficiently characterized by their peculiar order of symptoms.

The *first stage*, or period of increment, is marked by an exaltation of the sensibility, whence proceeds cephalalgia, one of the most constant characters of the disease. A tendency to sopor is sometimes manifested, especially when the arachnitis is seated at the base of the brain. The stomach also is sympathetically affected with nausea or vomiting. A febrile movement is generally established in the system, varying according to the age of the subject, the sensibility of the constitution, and the degree of the inflammation. In some rare cases, especially of metastasis, coma sets in from the beginning, and all the symptoms of the third period or stage (described hereafter) commence at once, and are quickly followed by death. The duration of this first stage is usually from a few hours to three or four days.

The *second* stage or period, which is that of reaction, is accompanied with disturbance in the locomotive powers, corresponding with that of the brain itself. It is in this stage that we observe convulsions, delirium, restlessness, oscillations or commencing dilatation of the pupils, and other phenomena of cerebral inflammation. In this stage cephalalgia is less constant than in the first stage, the sensorium appearing less sensible of impressions, as well internal as external. This stage varies in duration, from two, three, or four days, to one or even two weeks. It exhibits some difference in symptoms according to the principal seat of the arachnitis. When the latter is at the base of the brain or in the ventricles, coma is almost essential, and is combined with convulsions, agitation, affection of the eyes, &c.; whereas if the arachnitis be on the convexity of the hemispheres, *delirium* is the early and regular characteristic phenomenon.

The *third* stage is that of the shortest duration, varying from a few hours to three or four days, and rarely passing that period. This is the stage of collapse;—the abolition of sense, loss of motive power, paralysis, local or general, and coma, being the characteristic symptoms. In this stage, however, the features of various cerebral affections are combined, and consequently all distinctions between arachnitis and inflammations of other parts of the brain confounded.

The *collapse*, so characteristic of the third period or stage, and the *excitement* which distinguishes the second, have this peculiarity, that while one part of the body shall present the phenomena of one of these stages, another part shall present those of the other. For example, in the face, we shall often see the muscles of the eyelids paralytic, while those about the mouth are convulsed. It is principally when the arachnitis exists about the base of the brain, near the decussation of the optic nerves, that this medley of symptoms belonging to two different stages is observed.

It is almost needless to say, that a return to health from any of these stages (this is rarely the case from the third) is marked by a diminution of intensity in the symptoms, and a final cessation of them. Our authors confess, at the same time, that it is often difficult to distinguish the transition from one stage into another—especially of the first into the second, and the second into the third. No single symptom can be depended on for this discrimination—the whole must be taken in connexion. Six cases are next detailed by our authors, illustrative of the foregoing observations; one or two of which we shall condense for the use of our readers.

"*Case* 1. *Arachnitis of the Base of the Brain.* A child, five years of age, rickety from birth, but otherwise pretty healthy, was seized, without any known cause, at 2 o'clock, P. M. with violent vomiting, accompanied with headach so intense as to cause the child to utter the most piercing cries. This, which was the *first* stage, lasted till midnight, when the child became insensible, uttered sharp cries, and showed convulsive movements in the arms

dark colour from blood (sablé de sang)—all the viscera perfectly sound." P. 29.

Case II. In the *second* case related, the *third* stage supervened on the *first*, without any second stage. A girl eight years of age, was seized on the 15th Sept. 1820, with a slight febrile movement and moderate cephalalgia. On the second day the fever and headach continued. Nothing but the infusion of tilleul (linden-tree) administered. On the third day there was, in addition to the other symptoms, some degree of somnolency. The fourth day, in the morning, same state, but quite sensible and rational. In two hours after the visit, she was seized with convulsions of the upper extremities and insensibility. *Evening*, the face red, eyes turned upwards, eyelids wide open, pupils dilated, grinding of the teeth, foaming at the mouth, coma profound, trismus, pulse frequent, respiration laborious, great heat. Leeches, sinapisms, blisters, moderated the convulsions, but did not arrest the progress of the disease. She died on the sixth morning. The other four cases, one of which is from Morgagni, we must pass over.

Mode of Invasion. On the prompt diagnosis of arachnitis all our hope of success in the treatment must depend. The mode of invasion of arachnitis would be easy of detection were it always to take place in a previously healthy subject, and uncomplicated with other acute or chronic affection. But these complications or superventions are of frequent occurrence, and too often throw the practitioner quite off his guard, at the commencement of this dangerous malady. Our authors attach (and justly too) the greatest importance to a discrimination of the early diagnostic symptoms; and the reader must therefore have patience, if there appears a tedious minuteness, or occasional tautology in the descriptive parts of this treatise. Let him remember the words of the great philosopher—"Nihil est aliud magnum quam multa minuta." Let him also bear in mind that his task of *perusal* is easy, when compared with ours of analyzing, translating, and condensing the original.*

* The powers and advantages of the press are prodigious, and only fail to excite our astonishment as well as admiration, by being so familiar to us. A single example, and that of a comparatively insignificant kind, will illustrate this remark;—thus the literary labour of an individual, constructing this article, can be commanded by any person, in the remotest part of Europe, or of the world, for the sum of about as many pence as it cost days or rather nights in compiling! Intellectual labour would bear a very different price were it not for the invention of types.

"The symptom of the greatest importance, as was before observed, in the invasion of arachnitis, is *cephalalgia*. It is often intense, but varies considerably according to its seat. More than two thirds of the patients presented this symptom, and probably all would have done so, had they been seen at the very commencement, or had they been capable of giving a faithful account afterward, when brought to hospital. Cephalalgia then, occurring suddenly, and especially when violent, should always excite suspicion of arachnitis, whether it takes place in a person previously well, or labouring under some other disease. This suspicion would be strengthened by the occurrence of any disorder of the intellect, the organs of sense, or the locomotive powers. It is necessary, of course, if an external injury be inflicted, to bear in mind that the pain *may* be from inflammation of the scalp or pericranium; but where there is any doubt about the matter, it is safest to consider the seat of inflammation as internal rather than external of the cranium.

"After cephalalgia, in point of importance, comes disturbance of the intellectual faculties, varying in form, according to the habitudes of the patient. It is never very violent from the beginning. Disturbance of the digestive organs (sympathetically) is particularly conspicuous in the approach of arachnitis—indicated by nausea, or even vomiting, especially after taking any food or drink. Disturbance of the muscular system, at this early period, is a rare occurrence, and is generally *partial*, consisting of convulsive twitchings or motions of the upper extremities or face. When this symptom presents, we may generally conclude, that the period of *invasion* is past, and that arachnitis has been going on for some time unobserved."

Lastly, we remark derangement of the organs of sense, such as tinnitus aurium, errors of vision, faintness, vertigo,

with a mere *enumeration* of symptoms. They go into a particular analysis of each class, choosing rather to run the risk of being accounted tiresomely minute or tautological, than defective in the history and delineation of the disease which they have undertaken to portray. It is very probable that the reader (especially he who prefers a theoretical discussion to a dry detail of facts) may be somewhat fatigued with the first perusal of these delineations; but when a case occurs (and often will it occur) wherein the life of the patient and the reputation of the practitioner are at stake, he will turn, with trembling anxiety to these pages for assistance, and then he will think us any thing but prolix. The great utility of books, indeed, is useful reference in time of need.

"*Face or Countenance.* Every observant practitioner knows how important it is to study the expression of the countenance in diseases. In arachnitis, besides a general character of surprise and stupor, (etonnement et stupeur) which it is impossible to describe, but which cannot easily be mistaken, after being once seen, the most prominent symptoms are furnished by the eye. The pupils are dilated or contracted, or alternately in each state. The globe of the eye presents a greater or less degree of redness in the conjunctiva—squinting on one or both sides—constant rolling of the organ—its reversion upwards—and finally paralysis of the upper eyelid. In more than a third of all the cases, affection of the pupils was observed. Absolute immobility of pupil does not take place till towards the close of the third stage. Redness of the conjunctiva is very frequent, often amounting to actual ophthalmia. Strabismus occurred in about a tenth of the cases, and, together with the rotation of the eyes, generally was seen towards the third stage. Turning up of the eyes, and paralysis of the eyelid, were much more frequent than strabismus. They usually occurred towards the end of the second, and in the third stage. Errors of vision are not of much consequence, but morbid sensibility of the retina to light is a striking feature of arachnitis. All the ocular phenomena, however, are more conspicuous when the arachnoid of the base of the brain is affected, than when that of the convexity is inflamed."

The muscular actions of the face are often greatly deranged, and ought to be carefully noticed. Trismus is by no means a very unfrequent attendant on arachnitis, whether suppurated or not. Full a fifth of the cases presented this symptom. It seldom occurs till after the first stage is past. Grinding of the teeth, and foaming at the mouth, are generally seen only among children; and in the second and third stages of the disease. Spasmodic or convulsive movements of the facial muscles are not very frequent, and never seen but in the advanced stages. Generally speaking, the face

is coloured and animated in arachnitis—sometimes, however, our authors found it pale and expressionless.

Sensitive Apparatus. This apparatus furnishes symptoms the most frequent of occurrence, the most easy of detection, and the most characteristic of the disease, under the form of disturbance of the intellect, as delirium, somnolency, coma, cephalalgia, stupor; and, finally, derangement of the general sensibility, and of the senses in particular. Delirium more frequently affects adults, who are most disposed to arachnitis of the convexity of the brain. It is generally of the tranquil kind, or a muttering of half-articulated words between the teeth. The delirium is not usually so intense but that the patient can be roused to answer distinctly at times. These remarks appertain to the first and second stages. In the third, there is generally annihilation of the intellectual faculties. The commencement of delirium may, for the most part, be considered as the sign of transition from the first to the second stage, and forms the most characteristic feature of arachnitis of the convexity of the hemispheres. Where there is no delirium, there is generally either dulness, moroseness, irascibility, or preternatural excitement, and unusual exhilaration. In almost all cases, however, we see a marked diminution of the cerebral faculties, or an impossibility, as it were, of bringing them into action—so much so, that many patients can only be induced to utter monosyllables.

Somnolency (assoupissement) is one of the most frequent of all the phenomena of arachnitis, having been observed by our authors in 82 out of 116 cases detailed in the volume before us. When arachnitis pursues its ordinary course, this symptom does not appear till the end of the first or beginning of the second stage. In a very few cases our authors observed this somnolency from the

The muscular, or locomotive system exhibits various deviations from the healthy state, viz. general or local rigidity, or contraction—local or general palsy—local or general convulsions—to which we may add a third state, that of agitation. This last symptom was observed in about a fifth of the patients, and only in the first and second stages. It is not of much importance as an aid in the diagnosis—but not so *convulsions*. These, with paralysis, are one of the most characteristic signs of arachnitis. General convulsions were observed in one-third of the whole number. They are most common in children; and are principally seen in the second and beginning of the third stage; more pronounced in the upper than in the lower extremities. Rigid contractions of the muscles are seen (in order of frequency) in those of the lower jaw, posterior of the neck, superior and inferior extremities. They belong to the second stage, and early part of the third—sometimes constant, but generally showing intervals of relaxation. These contractions are not so rigid but that they may be overcome by a steady resistance of the hand of the bystanders. Our authors have several times seen *hemiplegia* suddenly supervene in the course of the first and second stages of arachnitis—generally when the inflammation was caused by external violence. 60.

The disturbances in the *digestive organs* have been sufficiently noticed under the head of invasion of arachnitis; and as to the state of the *vascular system*, pyrexia is so common an attendant on all the phlegmasiæ, that it can give us no aid in the diagnosis of arachnitis. The organs of respiration offer nothing that can much elucidate the diagnosis in question.

The temperature of the skin is generally elevated, and equally diffused over the whole surface of the body, being highest in the second stage of the disease, diminishing and greatly varying towards the termination of the third stage. The skin is generally dry during the first stage—in the second, sometimes moist, or even covered with an abundant perspiration—especially about the face. The decubitus offers nothing particular. It is the same as in all other diseases affecting profoundly the animal economy—particularly where the brain and its functions are much compromised. The patient lies prostrated, as it were, on his back, deprived of all energy, and every member and part of the body taking position according to the laws of gravitation. This decubitus only applies to the end of the second stage and the whole of the third. Our authors here take notice of a disagreeable odour which patients, labouring under this disease, exhale about the end of the second stage, and which they can compare to nothing but the smell of mice. It always proved a very unfavourable symptom.

Mode of Termination. Few, comparatively, recover who exhibit unequivocal symptoms of arachnitis. Nevertheless, in a considerable number of patients who had died of other diseases, and who had previously laboured under inflammation of the arachnoid, our authors found unquestionable traces of this peculiar phlogosis, such as adhesions and thickenings, proving that arachnitis is occasionally susceptible of cure. Farther on will be stated the mode of transition from the acute to the chronic form of the disease—a transition, in the experience of our authors and others, very frequently determining mental alienation. It is obvious that the prognosis in this inflammation is generally most unfavourable. Profound somnolency announces that the patient has but three or four days to live, and nothing but a sensible and progressive diminution of the symptoms ought to induce us to offer a favourable prognosis.

III. *Pathological Anatomy.* The various organic lesions discoverable on dissection of patients who have died of arachnitis are, 1st. A simple blush or redness of the arachnoid membrane. 2d. Thickening, augmented density, and loss of transparency in the said membrane. 3d. A purulent, sero-purulent, or sero-gelatinous exudation on its surface. 4th. The formation of false membranes. 5th. A serous effusion into the ventricles, between the laminæ of the arachnoid, or into the cellular tissue which unites the said membrane to the pia mater.

from which it may be easily scraped with a scalpel, the membrane then appearing thickened, red, and sometimes slightly villous. It is but rare that the pus is found collected in a focus in any considerable quantity. It varies a good deal in colour, nature, and consistence; and sometimes, instead of pus, we find only a serous infiltration into the cells of the arachnoid, resembling much the œdema of the glottis, after acute inflammation of that part. This purulent secretion is most commonly found at the convexity of one or both hemispheres, or else on some points at the base of the brain—particularly about the decussation of the optic nerves, and the tuber annulare. Another kind of effusion is a gelatinous layer, very much resembling the substance found in certain encysted ovarian tumours. On squeezing this layer a liquid is forced out, and a kind of unequal membrane is left between the fingers. This peculiar infiltration is usually found at the base of the brain, near the optics or pons varolii.

"At other times the arachnoid is covered with a complete *false membrane*, similar to that found on the serous tissues in other parts of the body. Its organization was sometimes so far advanced as to exhibit vascularity. These false membranes were more frequently found on the convexity of the cerebrum and cerebellum, than at the base of the brain, or in the ventricles." 72.

Serous Effusion was found in almost every case of arachnitis; but *generally* not exceeding an ounce in quantity—often, however, amounting to three, four, or six ounces. This liquid is *usually* contained in one, or in both of the lateral ventricles—sometimes, however, there is effusion in all four ventricles—and frequently it is dispersed over the whole surface of the arachnoid, which then appears bathed therein. This serosity accumulates at the base of the skull when we remove the brain. It is almost always limpid, occasionally milky, or even flocculent. This serous effusion is particularly apt to occur in arachnitis of the base of the brain, and of the ventricles. It is also more frequent in children than in adults.* When *adhesions* of the arachnoid present a cellular appearance, it is a proof that the arachnitis is of old standing. These adhesions, in Bichat's experience, degenerate occasionally into bone. Slight granulations on the arachnoid may sometimes be seen, by means of a good light, and appear to be of the same nature as those seen in the pleura and peritoneum after inflammation of those membranes.

* Our authors, of course, take care not to confound the effusion of arachnitis, with the dropsical effusions seen in the brains of old people.

IV. *Pathological Physiology.* This division of the work comprises an attempt to trace the connexion of outward signs with inward changes—to examine whether this connexion be subjected to any thing like regular laws, or varies with every idiosyncrasy of constitution, and thus becomes entirely personal or individual. Faithful to their plan, our authors appeal solely to facts, and decline all theory. The only plan of effecting the object of this division is, of course, a careful comparison of symptoms during life, with appearances after death. Of this comparison we now proceed to convey some account to our readers.

"*Dilated pupils* cannot be considered as proof of effusion into the ventricles, or between the coverings, or at the base of the brain; and for the following reasons:—of 26 cases with dilated pupils, 11 presented effusion into both ventricles—two into one ventricle—four with no dropsy of the ventricles, but effusion on the surface and at the base of the brain—one with effusion on the surface of one hemisphere only—eight without any trace of effusion in any part of the brain." 82.

From this statement it is evident that we cannot place implicit reliance on the phenomenon of dilated pupil in cerebral affections. Indeed, we have been so often disappointed by this symptom, that we have long ceased to attribute much importance to it, unless in connexion with various other phenomena. It certainly is *then* of some consequence.

"*Case* III. Desforges, (Mary) aged 38 years, was brought to the

and lateral surface of the hemisphere thickened, opaque, and denser than natural. A very thick puriform layer was uniformly diffused between the arachnoid and subjacent pia mater, while the same kind of fluid was infiltrated between the laminæ of the former membrane. There was no effusion into the ventricles, and the arachnoid lining them was healthy. The brain itself and the cerebellum were perfectly sound; nor was there any disease in the abdominal or thoracic viscera." 87.

Contraction of the Pupils. There is the same uncertainty attached to this as to dilatation. Nine cases presented this phenomenon in both eyes. In six of them there was serous effusion in both ventricles—while in the other three there was no trace of effusion any where in the brain.

"*Case* IV. Hubert Francois, 25 years of age, of feeble and delicate constitution, was received into the Hotel Dieu, in the month of March, 1814, for a catarrhal affection, to which much attention was not paid. Three weeks after his entrance, as he continued weak and without appetite, he was put on a course of bark and bitters, which, after two days' trial, were laid aside, as restlessness, watching, spasmodic movements, and afterward a kind of somnolency supervened. These symptoms went on increasing the succeeding day;—and, in the morning following that, there was loss of sensibility, with complete immobility. The pupils were remarkably contracted, especially the left—the breathing was embarrassed—the pulse became feeble, and death closed the scene on that evening.

"*Necrotomy.* Two ounces of limpid serum in the lateral ventricles. The arachnoid covering the whole of the left hemisphere thickened and opaque, with an albuminous concretion of more than a line in thickness beneath. In the fossæ occipitales of the left side the arachnoid was evidently inflamed and covered with an albuminous concretion, though less consistent than that on the left hemisphere. The bronchia were somewhat reddened. All the other viscera of the thorax and abdomen were perfectly sound." 92.

Rotation of the Eye. This was only seen in five cases, and in all of these there was suppuration of the arachnoid about the tuber annulare, and in four of the five, effusion also in both ventricles. Although no positive indication can be drawn from five cases, yet rotation of the eyeballs may fairly be regarded as a dangerous symptom.

Strabismus. This was often found to attend suppuration of the arachnoid, especially about the decussation of the optics; but no dependence can be placed on the phenomenon, except in conjunction with various other symptoms.

Trismus was a symptom occurring in the different lesions attending arachnitis, and therefore not peculiar to any.

Distortion of the mouth is a very frequent symptom of lesions affecting the cerebral pulp itself, as our authors will show in a future work; but in arachnitis it is not to be depended on.

Coma, which, in affections of the brain itself, generally indicates pressure from effusion or extravasation, is far from being a certain indication of such pressure in arachnitis. It was often seen by our authors where there was no effusion or suppuration, but simply inflammation of the arachnoid, especially about the basis cerebri, decussation of the optic nerves and tuber annulare. On the other hand, there has been no coma where the arachnoid has been suppurated, and sero-purulent effusion pressing on the brain. We shall introduce a short case in illustration.

"*Case* V. On the 1st April, 1814, a man, sixty years of age, plethoric, athletic, and of apoplectic constitution, was brought to the Hotel Dieu. He had been three days ill, occasioned by a violent fright, and presented the following symptoms:—face flushed and animated, nictitation of the eyelids, convulsive twitchings of the facial muscles of the lower jaw, and of the lips, confusion of intellect, calling for people absent, reviling those present, believing himself falling into water, over precipices, &c. and using violent exertions to avoid imaginary perils. All the limbs were in constant convulsive motion. This state continued the whole of the day, and he died that night.

"*Dissection.* Under the dura mater was found a kind of clot, formed by a thickening of the arachnoid covering the right hemisphere from infiltration of a sero-purulent fluid. The rest of the

indication can be drawn from their existence or non-existence. In conjunction with other phenomena, they render the prognosis more unfavourable

Vomiting, as was said before, is a very constant attendant on arachnitis, from the intimate sympathy existing between the brain and stomach; but there is no positive indication to be drawn from this phenemenon, as to the part of the arachnoid affected, or the exact state of the lesion, whether it be inflammation, effusion, or suppuration.

V. *Treatment.* Although arachnitis is a most dangerous and fatal disease; yet there can be no doubt that it may be frequently arrested in its destructive progress by judicious treatment, if taken in the early stage. If once entered on the second stage, recovery will be rare—our French brethren say impossible; but then the comparative inertness of their practice may account for their constant failure after the first stage of the disease is past.

Bleeding. This holds the first rank in the list of remedies, of course. It must be from a large orifice, so that the rapid effusion of blood may induce syncope, or an approach to that state. Our authors have had repeated opportunities of witnessing the good effects of depletion carried to this extent, which dissipated, as by a charm, the most excruciating headachs, and other phenomena attendant on, or ushering in, arachnitis. They recommend the opening of two veins at once to effect this purpose more speedily and more powerfully. This is a bold step for a French physician, and smacks not a little of that energetic British practice which it is too much the fashion in France to deride as empirical, and designate as Herculean.

In respect to the part from which blood should be taken in preference, our authors are rather undecided. It so happened, they observe, that it was from the arm the majority of the patients were bled, and though venesection, in this way, was often successful; yet, from a few other cases which were more particularly under their own immediate superintendence, and where the blood was drawn from the lower extremities, they thought the effect was more prompt and decisive in this than in the former mode. It must be exceedingly difficult to draw just comparisons of this kind; and though we by no means hold in contempt the doctrine of revulsion, as is too generally done in the present day, yet we cannot see the superior advantage which is likely to ensue from bleeding in the feet, in cases of cerebral inflammation, especially when we know that in all other inflammations,

the nearer the bleeding is to the seat of disease, the better. In inflammation of an internal and vital organ, we venture to assert that the venesection which is freest and most readily performed is the best; and, in this respect, brachial has the advantage over tibial or pedal bleeding.

Our authors have not been able to appreciate the effects of temporal arteriotomy or bleeding from the jugular vein, on account of the paucity of such operations, and the *difficulties* (as they state) which attend their performance.

They properly observe that the quantity of blood to be drawn, and the repetitions of blood-letting, must depend on the age and constitution of the patient, together with the intensity of the disease. They are probably right also in asserting that bleeding can be of no service except in the first stage, or in the very first moments of the second. Nevertheless, should symptoms of excitement or plethora occur in later stages of the disease, blood should be abstracted on the principle of euthanasia or lessening the sufferings of the patient, even where we have no hope of averting the fatal issue. We think this advice judicious in almost all other diseases as well as arachnitis, and for another reason that our authors have not given—namely, the *uncertainty* of all medical events, diagnostic and prognostic, and consequently the *chances*, however feeble, that often exist in circumstances apparently the most desperate.

Leeching. Although general bleeding forms the basis of

especially where there was reason to believe, from the symptoms, that the inflammation was on the convexity of the hemispheres. M. Recamier, a physician said to be rich in the rapeutical expedients, is in the habit of applying leeches in this way. They have not drawn blood from the scalp by scarifications, and think leeching superior. But cupping the temples, back of the neck, or between the shoulders, they conceive to be a valuable remedy, though too much neglected in France.

Immediately after blood-letting, or even during that operation, the feet and legs should be immersed in warm water, rendered more stimulating by the addition of mustard, salt, or muriatic acid. They should be kept immersed in this fluid half or three quarters of an hour. The bath should be hot enough to redden the skin, and draw the blood forcibly to the lower extremities.

Sinapisms have a still more powerful effect than the pediluvia; but our authors very properly remark that, in many constitutions, they produce a degree of reaction or excitement in the system, which has the effect of increasing rather than diminishimg the celebral congestion or inflammation, especially if copious sanguineous depletion have not preceded. They ought, in general, to be removed as soon as the skin is well reddened, or what is better, our authors think, a piece of fine muslin should be interposed between the sinapism and the skin. This prevents all the mischief, and detracts nothing from the efficacy of the remedy. Our authors condemn the application of sinapisms to the soles of the feet, as preventing the subsequent use of pediluvia. The inside of the legs and the knees are the best places.

Blisters. Of these our authors cannot speak with much confidence or certainty. As they have seen some cases, however, where violent cerebral affections are quickly dissipated by blisters covering the whole of the shaven scalp, they think this measure should be borne in mind as a useful auxiliary in these dangerous cases. At the same time they propose, as a still more energetic and sudden counter-irritant, the ammoniacal pomatum, lately recommended by Dr. Gondret.

Purgatives. Our authors very properly remark that, in a malady so dangerous as arachnitis, there is no part of the body to which we should not, by counter-irritants, endeavour to draw the irritability of the system, so as to prevent its concentration around the part inflamed. On this account we should not neglect purgatives, whose effects on the intestinal canal are analogous to those produced on the skin by

blisters, &c. Our authors seem to forget that another, and perhaps the most important effect of purgatives, is to reduce the quantity of circulating fluids in the body, by the rapid increase of secretion which they produce on the mucous membrane of the primæ viæ, and thus aiding sanguineous depletion in a very powerful manner. They recommend as purgatives, calomel, rhamnus catharticus, castor oil, or salts, combined occasionally with the drastic resinous purgatives. Desault and Bichat were in the habit of prescribing large doses of antimony or ipecacuan, in clysters, when inflammation supervened on wounds of the head:—and this measure our authors recommend in arachnitis, though their own experience is not sufficient to afford positive data on this point.

Our authors do not mention, and seem not to be aware that there are certain medicines, which, taken internally, exert considerable control over the action of the heart and vascular system, such as digitalis and tartrite of antimony. In this country these remedies are productive of considerable effect as aids to depletion by the lancet and purgatives.

Local Application of Cold. At the first glance, it might seem that the application of ice and of blisters to the scalp, involved some degree of incongruity. But the object—indeed the effect of blisters is to draw an afflux of blood and sensibility to the exterior of the head, in order to lessen irritation or inflammation of the interior. The object of cold is to constringe the vessels of the head generally, and lessen

Blaud's experiments and observations on compression of the carotid arteries, in cases of sanguineous turgescence of the cerebral vessels. Our authors refer to Dr. Blaud's paper, and quote some of his cases, but have not had experience of the measure themselves.

Trephine. Our authors have heard proposed and seen executed, the perforation of the cranium by the trephine, with the view of arresting the progress of arachnitis! They very properly condemn the measure as more likely to increase than to remedy the evil.

Affusion of Cold Water. This is a remedy for arachnitis which is little dreamt of by practitioners in general, but from which our authors have seen such decisive good effects, in numerous cases, that they go into very minute details respecting its mode of application, and its modus agendi, convinced of the great importance of the measure in this formidable disease.

The phenomena attendant on the affusion of cold water over the surface of the body, are well known in this country, since the classical exposition of Dr. Currie appeared. But we believe that neither Dr. Currie nor any of his followers contemplated the application of this powerful remedy in cases of topical inflammation, especially of a vital internal organ. But all reasonings and theories must give place to facts, however ingenious or well constructed the former may be. Dr. Recamier has put this remedy to the test of experience on a very large scale at the Hotel Dieu, of which our authors were witnesses, besides employing it in their own practice. They aver that the primary effects of cold water poured on the head and over the body are directly sedative on the surface, and through sympathy, on the brain and nervous system generally. They have repeatedly, indeed always, seen patients delirious from arachnitis, recover their senses *instanter* on affusion being employed—this melioration of symptoms being of longer or shorter duration according to the intensity of the disease. In the reaction which succeeds the cold affusion, we might naturally expect an exasperation of the optical inflammation; but experience proved it to be otherwise; for as the heat gradually expanded itself from the centre to the circumference of the body of the patient, the restlessness diminished or ceased—the pulse became full but not frequent—the thirst decreased—the intellectual faculties recovered more energy—the functions of the secreting organs were restored—the respiration became free, and a kind of temporary crisis is established. It is at this period that the patient labouring under arachnitis experiences the greatest degree of benefit from the cold affusion.

" Cet ebranlement géneral, opere sur le systeme nerveux, conjointement avec le degorgement sanguin des meninges qui resulte de l'application directe du froid sur la tête peuvent amener et amenent quelquefois, en effet, une revolution favourable à laquelle beaucoup de malades ont du leur salut." 145.

This melioration of the disease resulting from the cold affusion generally lasts several hours, at the end of which time the cerebral phenomena and all the pyrexial symptoms return, sometimes running higher even than before the affusion, but at others, ending in a state favourable to a return of the healthy order of things. If a collapse of the system succeeds, the prognostic is most unfavourable.

Our authors think that the end of the first and beginning of the second stages are the best periods, by far, for the employment of the cold affusion. At these periods the patient has strength enough to produce a sufficient degree of reaction. When the third stage has taken place, the organic changes in the inflamed tissues preclude almost all chance of recovery; and the cold affusion, of course, must be unavailing. Nevertheless, as "*melius anceps quam nullum remedium*," they think in these desperate circumstances the affusion should be tried as a forlorn hope. Our readers will easily perceive, that in all cases where this measure is employed, the rules and precautions laid down by Dr. Currie in its application to fevers, are to be attended to carefully. The mode of administration is also precisely the same as in fevers. Our authors very properly prohibit the cold affusion

ries of the head form a very important class of accidents, coming particularly under the cognizance of the former. To the general practitioner these cases are, of course, sufficiently interesting, and we hope will be found, in no mean degree instructive.

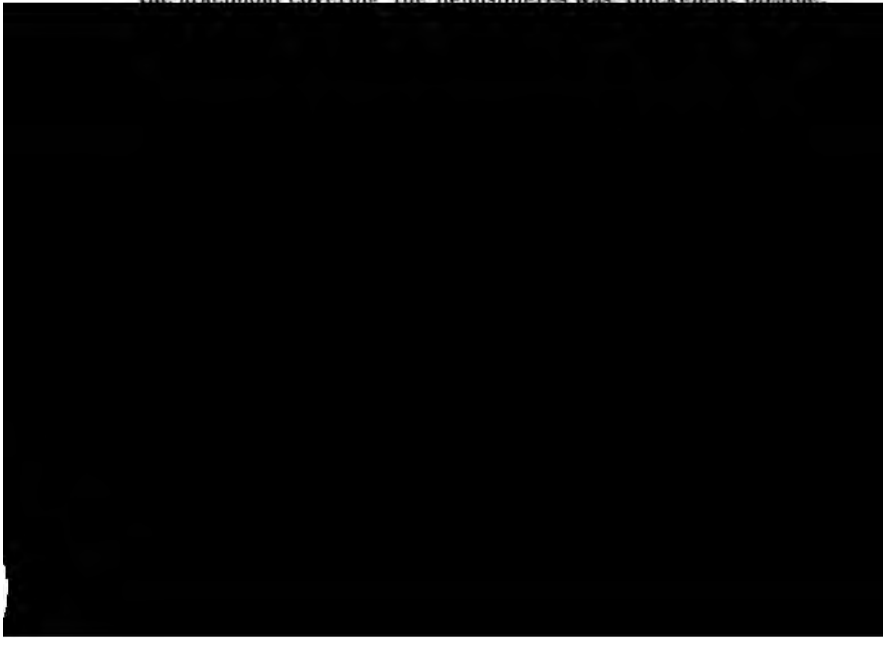
Case VI. A bricklayer, 22 years of age, received a contused wound on the left parietal bone by the fall of a mortar trough from a considerable height, which stunned him completely for a short time, when he again recovered his intellectual faculties. He was affected with spontaneous vomiting, and was carried the same day to the HOTEL DIEU, and bled twice on that day. He had also administered nauseating doses of emetic medicine in clysters. All went on well till the *thirteenth* day, when he experienced irregular chills, loss of appetite, and an erysipelatous eruption on the face. This erysipelas ran its course without accident till the 25th day, the wound of the scalp preserving a healthy aspect. On the 26th day, loss of appetite, dryness of the tongue, general uneasiness, diminished suppuration of the wound, some loss of power in the members of the right side, betokened no good. These symptoms increased in force during the 27th and 28th day—nights restless—whey for nourishment. 29th. Continual moanings—sensible when spoken to—right arm almost motionless—no discharge from the wound—pulse precipitous.—*Died in the evening.*

Dissection. Pericranium detached from the bone and covered with pus—external table of the bone itself, in the site of the wound, necrosed to the size of a shilling, with a fissure of some inches in length. Corresponding to the wound the arachnoid was inflamed some inches in extent—the lamina reflected over the internal surface of the dura mater being considerably thickened, and adherent to the lamina reflected over the pia mater, in such a manner as to form a kind of pouch filled with pus. Every other part of the brain and its coverings sound. 173.

This case shows us that an erysipelatous eruption on the face, after wounds of the head, ought to strongly excite suspicion of internal inflammation. It is evident that the arachnitis did not commence here till the 13th day at the earliest, or rather the 26th day, and that the local nature of the mischief might at last have been remedied, in all probability, by the trephine. When the erysipelas appeared, depletion was not put in force; and when things wore a more alarming appearance, no incision was made to examine the state of the bone. We appeal to our brethren, surgical and physical, whether the medical officers of HOTEL DIEU did not "leave undone those things which they ought to have done?" We entreat the attention of our surgical brethren to the following case, on account of the eminence of the practitioner under whom it occurred.

Case VII. A man, 30 years of age, was entangled under a pile of falling wood, and was carried, the same day, in a state of insensibility, to the HOTEL DIEU, where he was placed under the care of M. Dupuytren. There was a wound, of about an inch in diameter, on the anterior superior part of the left parietal bone, the latter being fractured, and a small portion depressed more than two lines below the level of the rest of the bone. Several incisions were made, and the depressed bone elevated, when the patient immediately became sensible. In the evening of that day there was some cephalalgia, and *eight ounces* (deux palettes) of blood were taken from the arm. The night was good. Next morning there was increase of headach, derangement of ideas, full, strong, and hard pulse. *Emetic whey* was ordered. In the evening the same state continued. *Eight ounces* of blood abstracted. Third day, the ideas incoherent, eyes fixed, face flushed, inclination to throw off the bed clothes. Abstraction of *eight ounces* of blood. Fourth day, incapable of answering questions. At the bottom of the wound the dura mater was seen raised up a little, and covered with pus. Bled from the feet; sinapisms. Temporary diminution of the stupor. In the evening complete insensibility—respiration difficult—cough—dura mater more tense. A small puncture made in that membrane, which gave issue to a spoonful of reddish serum. Thirty leeches to the temples. In the morning of the fifth day there were some trifling signs of returning sensibility; but all things got worse, and death closed the scene on that evening.

Necrotomy. Besides fracture, there were some fissures running in different directions. A clot of blood, the size of a six franc piece, was found between the bone and dura mater. The whole of the arachnoid covering the hemispheres was thickened, opaque,



practice is condemned by the *precepts* which our authors themselves have laid down, though they make no animadversions on this case of most extraordinary misconduct. This case furnishes also an example of the effects resulting from a rule now almost universally followed in France—never to apply the trephine. We believe few English surgeons would have permitted such symptoms to go on after fracture and depression of bone, without trephining. In this instance there is every probability that the trephine would have liberated the clot of blood pressing on the dura mater, and that active depletion and antiphlogistic measures would have checked the meningeal inflammation. These cases of malpractice are most valuable, as showing very unequivocally the dire effects of half measures, when important organs are inflamed.

Arachnitis from Insolation; related in Pinel's Nosog. Philos.

Case VIII. "A man, 40 years of age, much addicted to wine, worked hard during a whole day, at hay-making, under a powerful sun. After a frugal repast he went to bed and slept soundly all night. At daybreak he was found with the following symptoms:—violent headach—prostration of strength—involuntary and profuse lachrymation—redness of the face—incoherence of ideas—memory vacillating—extremities cold. This our authors designate the *first stage*. Second day (second stage also) phrenitic delirium—fever. Bled from the feet, antiphlogistic measures. Increase of all the symptoms. *Third day*, convulsions, tremors, death.

"*Dissection*. Inflammation of the dura mater and arachnoid—plexus choroides gorged—slight effusion in the ventricles." 182.

The above is a regular *coup de soleil*, and is not unfrequently seen in the hotter regions of the earth, but is not often so rapid in its march in Europe.

Our authors now proceed from external to internal causes, and first introduce instances of arachnitis from metastasis.

Case IX. "A young man, 20 years of age, became affected spontaneously with erysipelas of the face, which exhibited the usual phenomena of that disease. Having exposed himself imprudently to cold, the erysipelas suddenly disappeared, and was succeeded by headach, delirium, great restlessness, and convulsive movements of the limbs. Second day (and *third* stage of the disease) profound coma, convulsions, insensibility, unnatural movements of the lips and eyes. This state continued during the *third* day. On the *fourth* day a flaccid state of the members succeeded to convulsions—the breathing became stertorous—and death closed the scene in the evening.

"*Necrotomy.* The arachnoid covering the superior surface of the cerebral hemispheres, was coated with a false membrane, yellow, opaque, and very thick towards the sinciput and sides of the brain. The arachnoid covering the upper surface of the cerebellum presented the same appearances. There was also a serous infiltration into the cells of the whole arachnoid, particularly of the left side. The pia mater was injected and red." 186.

We shall not multiply instances of arachnoid inflammation from erysipelas of the face, but proceed to occurrences of the kind from various other causes.

Case X. Arachnitis from suppressed Menstrua.

"Tissot, a married woman, 27 years of age, having travelled more than 300 miles on foot, experienced a sudden fright, on the 6th October, 1816, producing syncope at the moment. The menses, which were flowing copiously, were instantly suppressed, followed by severe headach. On the following day (first stage) there were shiverings, increase of cephalalgia. *Third day*, restlessness, slight delirium. *Fourth day*, very severe pain in the orbital regions —sense of lassitude in the limbs—yellow tongue—frequent pulse. Twenty-five grains of ipecacuan, stimulating pediluvia, barley water and honey. In an hour after the pediluvium, loss of sense, and convulsive movements. Fourth day (second stage of the disease) another accession of loss of sense (perte de connaissance) continuation of the convulsions, particularly of the right side, trismus, irregular action of the eyelids, pupils dilated and insensible to the light, face flushed, breathing difficult. Two large blisters to the thighs; antispasmodic potion, demi-lavement. At ten o'clock convulsive movements of the right side, tendency to paralysis of the

and red—the pia mater gorged with blood and serosity—and much serous effusion at the base of the cranium, and in the vertebral canal. There was also inflammation about the cardiac orifice of the stomach, and in the mucous membrane of the small intestines.

Without pretending to explain the nature of the hydrophobic poison, our authors justly observe that by far the greater number of hydrophobic dissections are in correspondence with the foregoing pathological report, and consequently that cerebral inflammation may be expected as a concomitant, though doubted as a cause of rabies canina. We believe that the methodus medendi—if *medendi* shall ever be applied to hydrophobia—must always hinge upon views of this kind.

Our authors are convinced from experience that arachnitis of the base of the brain, and of the lining of the ventricles, is far more frequent in children (forming, in fact, hydrocephalus acutus) than in adults. We shall therefore introduce here a few cases illustrative of this too common and too fatal disease.

Case XI. "Depuis, 3½ years of age, after enjoying good health, was taken on the 14th July, 1817, with spontaneous vomiting of greenish matters, which continued more or less till the 24th of the same month, accompanied with prostration of strength, a slight degree of drowsiness, and smart paroxysms of fever, without delirium or restlessness. During all this time there was obstinate constipation and violent headach. The child frequently screamed out, and there were some convulsive movements about the eyes. The intellect did not seem disturbed. He was transported to the HOPITAL DES ENFANS, on this day, the 11th of the disease, and the following symptoms were noted. The child lay on his back, the trunk immobile, head turned backwards, eyelids heavy and closed, pupils little dilated, features altered, eyes turned upwards. The child was sensible when spoken to, and complained of great pain in the occipital region—drowsiness constant, pulse feeble, irregular, and frequent; respiration slow, unequal, and apparently difficult—tongue coated yellow; constipation. Mustard pediluvia—lavements—lemonade—nitric ether mixture. In two hours some convulsive movements—screamings—complaints of violent pain in the back of the head, to which part the child was constantly applying its hand. Twelfth day, (second in hospital,) piercing cries during the whole night—strabismus—features greatly altered. Lemonade, with a grain of emetic tartar—lavements—mustard pediluvia—blister to the nape of the neck and behind the ears—ice to the head. In two hours a strong paroxysm—much crying during the day—loss of intellectual and sentient faculties. *Thirteenth day*, a general remission of all the symptoms—pulse very irregular—great irritability of temper. Same treatment. *Fourteenth day*, (third stage of the disease)

pupils dilated and immoveable—profound somnolency—pulse irregular, feeble, small, and extremely quick—eyes prominent, affected with strabismus, and half open—head inclining to any position which the laws of gravity dictated—the intellect not much affected. Blisters to the vertebral column. *Fifteenth day*, same state, but the intellect more disturbed. *Sixteenth day*, profound coma—gradual extinction of the vital and natural functions—death.

Dissection. Arachnoid inflammation at the base of the brain about the decussation of the optic nerves, and over the tuber annulare—the membrane itself covered, in many places, with an albuminous exudation, penetrating into the fissura magna sylvii. Eight ounces of serous effusion in the ventricles. No other morbid appearance in any part of the body." 237.

We need hardly remark that the *treatment* in this case was admirably adapted to show the genuine and unsophisticated ravages of disease. Our medicina *perturbatrix* in this country gives us few opportunities, comparatively, of observing these undisturbed morbid processes in perfection. On this account continental pathology is a very valuable article of importation into English medicine. The following case offers a good illustration of what Dr. Golis has denominated the "water-stroke," by the suddenness of the effusion.

Case XIII. "Petit, 6 years of age, entered the HOPITAL DES ENFANS on the 18th March, 1816, without any symptoms of illness. During the 19th also, the child appeared well. On the 20th, in the morning, our authors found him in strong convulsions—tetanic—constant tendency to bend backwards—loss of sense—dilated pupils—difficult deglutition—tension and tenderness of the abdomen

variety and shade of arachnoid inflammation. What we have quoted, will, we hope, be sufficient to convey a plain, practical view of the attendant phenomena of this dangerous affection. We need hardly wonder that arachnitis should be very generally fatal under the French mode of treatment; yet even *they* have brought forward several unquestionable proofs that the disease is susceptible of cure in many instances, especially when treated with any thing like decision. In this country, we see examples of cerebral inflammation every day subdued by active depletion; and we hope the pathological facts which we have, in this article, laid before our junior brethren, will induce them to pay increased attention to the phenomena attendant on, and indicative of, so destructive and *terrible* a malady. The following case is a very interesting and satisfactory one.

Case XIII. "A man, 45 years of age, of sanguineous temperament, and excellent constitution, and who had served eighteen years in the cavalry, was seized, after a forced march which caused him to perspire freely, with cold chills, headach, fever, general uneasiness, (malaise,) tightness of the chest. No medical treatment was employed, and, of course, the man got worse, and at the end of ten days from the invasion, he entered the Hotel Dieu, presenting the following symptoms:—face coloured—conjunctiva injected—pupils immoveable—headach—delirium for a few hours past, yet capable of answering correctly when roused—pulse full and quick—skin hot and dry—abdomen painful—respiration impeded—expectoration of a reddish tinge. Sixteen ounces of blood from the arm—leeches to the nape of the neck, to the abdomen, and to the anus. The thoracic and abdominal symptoms subsided, but the cerebral ones lost nothing of their intensity. The bleeding and leeching were reiterated. The patient remained a few hours in the same state. Blisters were then applied to the legs, and the symptoms were greatly mitigated for four or five days, at the expiration of which the fever and delirium returned, without any other particular symptom. Leeches were again applied to the neck, and blisters to the thighs, which again subdued the fever and cerebral symptoms. The patient passed a fortnight in a tranquil state, but the appetite and strength did not return to their natural range. A diarrhœa now came on, with cough and fever, against which various remedies were unavailing. The strength daily declined, but there was no headach, nor intellectual disorder of any kind. It was ascertained by the stethoscope, rather than by the respiration or cough, that organic disease existed in the left side of the chest. The diarrhœa continued, and the patient died at the end of six weeks from the commencement of his complaint.

"*Dissection.* The arachnoid covering both hemispheres was thickened and opaque, forming a kind of cap for the brain. The arachnoid of the base of the brain was healthy. There was very

the brain, and consists in a throwing back of the head, and cervical portion of the spine, while the remainder of the column continues in its natural position. In spinal arachnitis, on the other hand, the whole vertebral column is formed into a kind of inflexible arch, such as our authors never observed in simple inflammation of the cerebral arachnoid.

Next, in order of diagnostic importance to this opisthotonic contraction, is *pain* in some part of the back, varying in seat and degree, but generally most severe in the part corresponding to the site of the inflammation. It also shows remissions, and occasionally complete intermissions. In a very few cases, where cerebral arachnitis was complicated with spinal, the patients did not complain much of pain in the back; but then they were labouring under severe cephalalgia, and our authors very truly remark that violent pain in one organ or part of the body, will often mask affections of other organs or parts; or so absorb the patient's attention as to render him inattentive to any other sensation.

The arching backwards of the spinal column, then, and pain in the back, are the only diagnostic symptoms on which our authors place any reliance. In one patient only they remarked violent pain in the lower extremities. The treatment of this disease must consist in general and local bleeding, and counter irritants—but it has been very generally fatal in the hands of our continental brethren. We shall now proceed to lay before our readers a selection of such cases as appear to us best calculated to make useful impressions on the practitioner's mind.

Case XIV. "Leger, a terrace-maker, 28 years of age, of athletic form and strong constitution, had been exposed to great fatigues and bad weather, in demolishing the castle of St. Ouen, near Paris. On the first or second day of December, 1816, he was wounded on the anterior and inner side of the right foot by a nail, which he extracted, and then continued his work. On the 7th December he felt pains in his back. On the 10th he felt an unusual degree of lassitude, while a slight trismus prevented the free exercise of mastication. On the 12th there was some difficulty experienced in bending the spine; yet still Leger persevered in his daily labours, and even enjoyed some sleep by night. On the 13th, however, Leger found himself unable to walk, and therefore took to his bed, experiencing the most acute pains in his back. In the night the stiffness of the trunk and the trismus increased—the pains in the back and neck were so excruciating as to force the patient to cry aloud. On the 14th at noon he was conveyed to the Hotel Dieu; the vertebral column bent into an arch backwards—the jaws incapable of extension to more than half an inch—sense of great con-

dilated, especially the right one, but still contractile to the light—great stupor—when roused, with difficulty, from this stupor, he complained of violent occipital cephalalgia, buzzing in the ears, and ocular spectra. He recognized his parents for a few minutes, and then fell into a state of reverie and stupor. The lower extremities and left arm were flaccid and even paralytic—the breathing excessively quick and difficult, 41 in the minute—action of the heart strong and regular, but not at all corresponding with the pulse, which was small, vibrating, and 120 in the minute. In the evening there was exacerbation of all the symptoms, with complete loss of sense. *Fifth day*, stupor still more profound—opisthotonos continues—complete paralysis of the left arm, rigidity of the right—pupils dilated and immoveable. In short, all the symptoms became aggravated, and death supervened in the evening.

Dissection. Inflammation of that portion of arachnoid situate at the base of the brain, where it was thickened, especially on the tuber annulare, and infiltrated with serum. The arachnoid covering the anterior of the hemispheres presented some patches of inflammation, the ventricles containing two ounces of serum. The vertebral canal being opened completely, and the dura mater slit up, the latter membrane presented a uniform redness throughout its whole extent, the arachnoid covering the spinal marrow being highly inflamed for the space of six or seven inches—the inflamed portion being at a good distance from the head, and covered with a coriaceous exudation. The canal itself contained a quantity of reddish serosity. There were some tubercles in the lungs, and an inflamed portion of peritoneum over the liver." 563.

Our authors consider, and we think justly so, that the opisthotonos was clearly attributable to the spinal arachnitis, especially as there was a considerable space of sound arachnoid intervening between that portion inflamed within the cranium and that within the vertebral canal.

Case XVI, "Mary ————, 28 years of age, was violently agitated by an insulting proposal made to her at a time when the menstrual discharge was flowing. The catamenia were suddenly suppressed, and the woman became affected with cold chills for twenty-four hours, succeeded by heat of surface, ardent thirst, and globus hystericus. On the third day, bilious vomiting. On the fourth, the vomiting and hysterical symptoms subsided, and she was received into La Charite, presenting the following phenomena:—*fifth day*, face flushed—eyes brilliant and sparkling—neck tumefied—head thrown backward—constant pain along the whole line of the vertebral canal exasperated by the slightest motion, (not by pressure,) so as to cause the patient to cry aloud—breathing confined and panting—pulse sharp and quick—skin hot and dry—no stool for four days. Fifteen leeches to the anus—purgative lavement—mustard pediluvia—frictions with liniments to the spine. *Sixth day*, diminution of the symptoms. Blisters to the nape of the

neck, and 24 leeches behind the ears. *Seventh day*, some disturbed sleep. The sensibility of the head and back exalted—tetanic rigidity of the neck and spine great---respiration more distressing than ever---face pale and expressive of great suffering. Venesection from the arm, blister to the sacrum, sinapisms, lavements, &c. In three minutes after it was drawn the blood was covered with a thick buff, and strongly cupped. In an hour the patient felt better. The bleeding was therefore reiterated. *Eighth day*, the melioration continues. Another venesection. *Ninth day*, the blood was buffed and cupped as much as ever; yet the patient is not so well to-day. The pain in the head and back is more acute---the features are shrunk, and much altered. Forty-eight leeches were placed as a cordon along the spine on both sides of the vertebræ. These measures produced no relief, and the patient died next day at noon.

Dissection. The vertebral canal being opened, and the dura mater incised, a layer of whitish, opaque, and membrane-form materials, was found covering the whole spinal marrow, from the occipital hole to the sacrum. On pressing this sheath a fluid was made to flow back into the cranium. On scraping it with a scalpel nothing was separated from it, it was so firm and polished. The arachnoid and pia mater were very much injected, particularly in the fissura magna sylvii. In the right side, there was an albuminous concretion, similar to the albuminous layer in the vertebral canal. Similar concretions were found on the external surface of the right hemisphere, under the tentorium cerebelli, and between the cerebellum and basis cranii. The lateral and third ventricles were greatly distended with a lactescent fluid. Organs of the chest and abdomen perfectly sound." 568.

The above is certainly a well-marked case, and showed

The cases which press upon our notice in this division of the work, are so very important and interesting, that we entreat the most serious attention of our readers to them, nor do we deem it necessary to make any apology for extending this article by the introduction of such valuable materials—materials which must otherwise be almost entirely lost to the British public.

Case XVII. "Cotier, a soldier in the 32d regiment, had been cured of itch at the St. Louis Hospital, but not yet discharged. On the 8th May, 1814, after a debauch in vinous and spirituous liquors, he fell asleep in an open court, where he lay several hours exposed to the sunbeams. In the evening he was carried into his ward, and his companions reported that he passed a very restless night, often starting out of his bed, and uttering piercing cries. Next morning he presented the following phenomena:—General cephalalgia, intolerance of light and noise, red and dry tongue, nausea, difficult deglutition, tenderness on pressure of the epigastrium, respiration laborious, pulse small and quick, marked stiffness in the neck and trunk. A vein was opened in the arm, and another in the foot; but they furnished very little blood. Towards evening, somnolency when the patient was left quiet, but great agitation when touched. Efforts to get out of bed—piercing cries—convulsions of the facial muscles—confusion of intellect, and extreme difficulty in answering questions. A dozen of leeches to the neck. *Third day*, face flushed—eyes fixed—pupils dilated and immoveable—conjunctivæ injected—involuntary lachrymation—contraction and rigidity of the extensor muscles of the neck and spine, forming opisthotonos—inability to speak—diarrhœa—involuntary discharge of urine. Twelve leeches to the anus, blisters to the legs. *Fourth day*, tetanic symptoms augmented—subsultus tendinum—pupils still dilated and insensible to the most vivid light—erysipelatous edema of the left side of the face—breathing short and embarrassed—pulse intermitting. Died at three, P. M.

Dissection. Vessels of the dura mater gorged with black and coagulated blood—arachnoid membrane almost universally inflamed, being red, thickened, injected, and covered with a sero-purulent exudation, in considerable quantity. The medullary substance of the brain was of a reddish hue, and presented innumerable bloody points when sliced. The ventricles contained between six and seven ounces of watery fluid. On laying open the spinal canal, the same marks of this terrible phlegmasia were evident. The spinal arachnoid was inflamed and thickened throughout its whole extent, and a sero-purulent exudation pervaded all parts of the canal." 571.

In the above case, it will be observed that the pain along the vertebral canal was not complained of, as in most of the cases already detailed. This may be accounted for, however, by the intense state of disease in the brain, and the con-

sequent derangement of intellect. Indeed, it may be very generally observed, that intense cephalalgia, when it exists, absorbs greatly the attention of the patient, who often neglects to mention other pains, unless closely questioned. This ought to be borne in mind.

We shall introduce but one more case, and that principally with the object of admonishing some of our brethren, who would appear to view the vascular system as the grand agent in all maladies, to the almost exclusion of the nerves. We shall perceive, in the following case, several of the characteristics of spinal arachnitis, terminating in death, and yet without presenting a particle of inflammation in head or spine. We shall make some farther reflections after the case is stated.

Case XVIII. "A woman of the name of Roux, 62 years of age, and enjoying habitual good health, experienced a fall, in the middle of April, 1817, which, according to her own account, gave the spinal column and head such a shock as deprived her of sense for a few minutes. From this time till the 29th August following, the occipital region and vertebral column were the seats of constant pain. On the last-mentioned day she experienced contractions in the arms, especially the right arm, with great stiffness and rigidity in the neck and trunk—difficult deglutition—pain in the throat, occipital region, and spinal column—tenderness and tension of the abdomen—contraction of the left pupil. The intellectual functions were free; but the tongue was dry and red, with heat of skin, bitter taste in the mouth, and inclination to vomit. The pulse was quick, but void of force. Venesection, warm bath, purgatives,

cases. What are we to infer from this? Why, that the ridiculed state called *irritation* of the nervous system will sometimes imitate *inflammation*, and go on to the destruction of life, without leaving a single trace of organic lesion after death. This may teach our younger brethren what a part the nervous system is capable of playing occasionally in the animal economy. At the same time we would be very sorry to advise the practitioner to lean much on the chance of having these nervous irritations to deal with, when the symptoms are equivocal, and there are any reasons to suspect inflammation. In the first place, where the proper phenomena or signs of phlogosis are present, there will be actual inflammation in three cases out of four. In the second place, the mischief arising from treating a neurosis as an inflammation is nothing compared with that which must result from treating a phlegmasia as an irritation or nervous affection. Finally, as we are convinced that nervous irritation is the cousin-german, if not the frequent parent of inflammation, we think it by far the safest practice, in all doubtful cases, to combine the depletive mode of treatment with that which may have a soothing or sedative effect on the nervous system.

We have now brought the analysis of this important work to a close, after expending on it no inconsiderable portion of time and labour. We may again repeat it as our conviction, that the authors of the work before us have taken the only proper mode of investigating a most important class of diseases; and that, although they may not empower us to always distinguish the precise seat of disorder within the head or spine, yet that they will often assist the inexperienced practitioner, and enable him to ascertain, with very considerable probability, not to say accuracy, whether or not he has inflammation of the brain or spine to contend with—a point of knowledge, in the determining of which the life of his patient, and possibly his own reputation, may be involved.

We shall take an early opportunity of introducing to the English reader an account of those pathological researches on the diseases affecting the *medullary* substance of the brain, now publishing on the continent, and part of which are already in our possession. In the mean time we entreat the earliest attention of our junior brethren to what we have here presented them.

II.

An Essay on the Effects of the Fucus Helminthocorton upon Cancer, more especially in the Stage denominated Occult &c. &c. &c. By William Farr, Member of the Royal College of Surgeons, &c. One vol. 8vo. pp. 112. London, 1822. With a Plate.

Prona via est et eget moderamine certo.

Our readers need not imagine that we have one particle more faith in the power of "Corsican moss" over cancer, than in that of "Iceland moss" over consumption. We notice the work before us merely for the sake of alluding to some of the pretended specifics for this last formidable disease, which have, in their turn, excited the curiosity of credulous practitioners, abused the ear of the public, and, as may readily be imagined, disappointed the hopes of the suffering patient. Human life, though despised, in theory, by philosophers and enthusiasts, is yet so highly prized, in fact, by all ranks and ages, that when assailed by incurable diseases, the patient will fly from the candid physician to the lying quack, or ignorant pretender; and to insure a trial of any nostrum, however absurd, it is merely necessary to roundly assert, without a particle of evidence except the ipse dixit of the assertor, that it is infallible. If a new and a hard name can be found for the remedy—or a juggling mysterious air given to the measure, the work is half done. Those veracious records of the times, the newspapers, proclaim the important discovery, and the system of delusion is forthwith in full operation.

Now did the nostrum-monger and "peculiar practice" man extend their fallacious promises only to those whose maladies resisted the regular practitioner, it would be exceedingly pardonable, for what can be a more terrible situation than that of corporeal suffering without prospect of relief, except by a lingering death! But the misfortune is, that thousands of people are persuaded through their own fears, and the representations of the unprincipled, that they are labouring under formidable diseases, when their co are really harmless, and thus they become the too often the victims of mercenary Medicaster Charlatans. We have reason to believe a quantum of mischief is committed, [illegible]

misery inflicted far exceeding belief. We wish we could assert that none of the regular faculty ever compromised the dignity of the profession, or forgot their own rank in society, by setting the example of manœuvring but a degree removed from the practice of empirics themselves!

Mr. Farr introduces a short, and we imagine, a pretty correct, account of the different means, regular and irregular, now in use for the relief or cure of cancer. He commences with the pressure process of Mr. Young, which he considers to be ingenious, and indicative of mechanical talent in its inventor; but laments that this gentleman should not have confined his plan to those cases where it was likely to prove useful, as he would then have sustained the credit and reputation he gained at its first introduction. We foresaw, indeed, that when Mr. Young had got so enamoured of his favourite measure as to make it paramount, or even exclusive in the treatment of open cancer as well as schirrhus, his plan would soon fall to the ground, as it has now done. We have reason to know, however, that the pressure, applied by himself and a few others who followed carefully his exact mode of application, was, in some instances, successful, and in several productive of relief. But the "cancer institution" is now no more, and its founder, we believe, has left this metropolis.

Mr. Lloyd, of Falcon Square, appears, Mr. Farr observes, to follow, with some variations, the method proposed by Mr. Carmichael, using, in addition, setons near the diseased part, and occasional sedatives.

Mr Wheeler, of this city, is much in the habit of treating cancerous cases, (and he has a good deal of practice in that line) by hemlock internally and externally. Mr. Chevalier, of South Audley Street, it seems, follows the same plan.

There is a Dr. M'Donald, of Orchard Street, who treats cancer constitutionally, and, from Mr. Farr's account, has been successful in four cases. But we have now entered the domains of the nostrum-monger; for Dr. M'Donald, who is like the famous Captain Wattle—"*all* for love, and a *little* for the bottle"—throws a veil of mystery over his method of treatment, and "like the miser with his hoard, hugs himself in the thoughts of his possessions," without communicating, for the good of suffering humanity, this important secret. But we absolve this medical miser of the sin of withholding his treasures from the community, perfectly convinced that he has no such treasures to distribute.

After what appeared in a former number of this Journal, it will not be necessary to say much of the knight of Nelson Square, Mr. Aldis, who is running his career of glory in the

nostrum-monger line. This worthy member of the College of Surgeons had the effrontery to publish a book on a *secret* remedy, and dedicate that wretched performance to the late President of the College of Physicians! Nay, he had the audacity to address the President in terms of familiarity, as "My dear Sir," and use other expressions that might lead the public to conclude he was actually *acquainted* with Dr. Latham, or that Dr. Latham had given him permission to dedicate this puff to him! Sir Astley Cooper's name is also profaned by the draw-cansir knight.

We have said before, that some degree of sanction or precedent has been given to the nostrum-monger, by certain imprudent members of the regular profession pretending to *peculiar*, and, in some instances, *concealed* modes of relieving or curing diseases. We are decidedly averse to all such pretensions, as being not only derogatory from the dignity of a liberal science, but calculated to draw ridicule on the profession itself. It is painful to us to notice these aberrations from prudent and dignified conduct; but we deem it a duty to throw out these hints, and hope they will be taken in a proper quarter.

We shall here also make a few reflections on the subject of suppressing quackery, and restraining irregular practitioners. The College of Physicians have been blamed for permitting Charlatanism to flourish under the very eye of the College. But we really know not how that body can undertake the dirty and Herculean task of cleansing this Augean stable, while the Government lends its sanction towards the accumulation of the filth. We observe, with grief also, that almost every Charlatan in London belongs, or asserts that he belongs, to the College of Surgeons! Not one of them dares to make the same use of the College of Physicians. Here then is a most convincing proof of the great utility which has resulted from the rigorous laws of the latter body, since not a single member of that College has disgraced himself by empirical conduct. So far, indeed, from wishing to see the College laws relaxed, we sincerely hope they will be made still more inflexible. We are quite satisfied that were the facilities of entering the portal of Warwick Lane as great as those attending the passing under Machaon and Podalirius in Lincoln's-Inn-Fields, we should soon have every newspaper teeming with advertisements of *secret remedies* invented and sold by "Members of the Royal College of Physicians of London." Let the College of Surgeons ponder on these things; and let the College of Physicians watch, with a jealous eye, the admission of members who have shown any disposition towards secret remedies, or concealed *processes* in the healing art.

There is yet another subject to be noticed, and that is—the toleration by the College of several medical gentlemen (regularly educated, but not members of the College) within the metropolis, who officiate as physicians, and take the title of doctor. Reflection and observation induce us to think that it is both wise and liberal in the College to abstain from every thing in the remotest degree resembling persecution, or, what would be the same thing, *prosecution* of the said gentlemen. The present state of society, intellectual and moral, would render any such measure both odious and nugatory, even were the college inclined to exercise it, which we believe they are not. The College very properly stands on the *defensive*, and says—"Thus far shall ye come, but no farther," unless ye fulfil the prescribed conditions. We shall take no step to prohibit your practice, but we will not consult with you, nor acknowledge you as members." It is abundantly evident that no man can hope for any thing like practice, *as a physician*, in London, with such a millstone round his neck. And if a man chooses to practise midwifery, or surgery, or pharmacy, or all three, and yet retain the title of M. D. conferred by another university, we do not see why the college of London should entangle itself in lawsuits to compel these individuals to relinquish mere titular dignities which are not even the shadows of substantial benefit to themselves, or practical encroachments on the prerogatives of others. We repeat it, therefore, as our decided opinion, that the College is perfectly right, and perfectly politic, in abstaining from every other measure than the veto of consultation, in the cases under consideration. And knowing, as we do, the high respectability and superior attainments of some of the individuals thus circumstanced, we consider it both unjust and ungenerous, in any of their brethren, to hold up *that* as a stigma on their professional character which the only proper authority, the College itself, has not thought proper to visit with its censure.

The fucus helminthocorton, the subject of the present Essay, need not detain us long. It seems that, in a conversation between Mr. Farr and Mr. O'Meara, the latter recollected some observations of Napoleon, (a pretty medical authority truly!) expressive of his surprise that "Mousse de Corse," which was employed on the continent merely as an anthelmintic, should not be employed also in the dispersion of tumours, as he had seen instances of its efficacy in the Island of Corsica. This hint was not to be lost, and accordingly our author procured the helminthocorton, which, as a matter of course, "has more than answered the expectations he had at *first formed*." P. 13. Mr. Farr acknowledges

that open cancer is not to be cured by the new remedy. It is only applicable to some forms of "*occult cancer.*" We shall occupy our readers' time no longer on this subject; for it is hardly worth while to "prognosticate a prophecy," as the Morning Chronicle used to say, respecting the fate of the helminthocorton.

III.

A Series of Lectures on the most approved Principles and Practice of Modern Surgery; principally derived from the Lectures delivered by Astley Cooper, Esq. F. R. S. &c. &c. &c. at the united Hospitals of Guy and Saint Thomas, and in which will be found some of the Opinions of the most celebrated Surgeons, from the Time of Hunter, to the present Moment: interspersed with numerous Cases. By CHARLES WILLIAM JONES. Second Edition. By CHARLES MAYGAY SYDER, Surgeon. One vol. 8vo. pp. 448. London, Highly, 1821.

THERE was some doubt of the legitimacy of the first edition of this work, but the present is dedicated to Sir Astley

The work consists of thirty-five chapters or lectures, embracing, in fact, almost the whole circle of surgery. It cannot be expected that we should attempt any regular analysis of an elementary volume like this; and yet, as coming from such an authority in surgery, we may well be permitted to freight a moderate proportion of our pages with matter of such high import. We shall also occasionally advert to what we consider as *misconceptions* on the part of the gentleman who took down these notes. We may remark, in limine, that the whole of the matter in this work is exceedingly interesting, though, partly from the mode of delivery and partly from the imperfect notation, it appears very unconnected, and the transitions from subject to subject, exceedingly abrupt in many instances.

We shall pass over the first lecture, with the exception of a glance at two cases related to show how wounds or accidents are modified by irritability or inirritability of constitution. A man who lived intemperately was bled by Mr. Saunders, two days after which he was taken ill. On the fifth day the arm was inflamed, and pus discharged from the wound, the pulse 120, with delirium. Opium, purgatives, and other medicines produced some mitigation, but the patient died on the ninth day. On dissection, the skin was found mortified round the arm, the cellular membrane inflamed, but the vein which had been opened was uninjured. As a contrast to this, Sir A. relates the case of a brewer's servant, who was run over by a dray, his elbow joint being opened, the bones fractured, and the artery separated from the bone. The man would not consent to amputation, so the wound was closed. It soon healed, and the man perfectly recovered. Many amputations, we are convinced, are unnecessarily performed.

"To relieve constitutional irritation, when excessive, or arising from the injury of any vital organ: 1st. take away blood, in proportion to the strength and plethoric disposition of your patient.

"2dly. Restore the secretions of the liver, kidneys, skin, and intestines.

"In children give calomel and antimonials, for nineteen diseases in twenty in them are inflammatory, and this is the best medicine to restore perspiration, &c.; bathe the feet in warm water: by these means you take off the momentum of the blood, and give a healthy action to the secreting organ.

"In adults, it will be better to give calomel at night and saline purges the following morning.

"3dly. Lessen the nervous irritability by opium, combined with some sudorific.

"And, 4thly, *Guide your patient's diet and regimen.*" 13.

The second lecture opens with one of those blunders which the student has so often fallen into in taking down the statements of the lecturer.

"The swelling in a tumour proceeds from the dilatation of the vessels *from* the effusion of coagulable lymph into the interstices of the cellular substance."

The above passage is rendered not only absurd but erroneous, from the want of "*and*" between "vessels" and "from." How could Mr. Jones imagine that the dilatation of vessels arose *from* the effusion of coagulable lymph into neighbouring cells?

Here the lecturer takes occasion to caution us against cutting on any inflamed part in amputation, since independent of the excruciating pain given, "the stump will hardly ever do well." As a general rule we believe the above is good; but naval and military surgery presents innumerable cases where we are obliged to cut through lacerated and even inflamed parts in operation, and yet the stumps do well in the majority of instances. The subject of inflammation affords much interesting matter in Sir Astley's lectures; but we can merely notice a point here and there. Alluding to the gangrene which sometimes takes place in the parts pressed upon in fevers, or where blisters have been applied, he recommends the calomel and lime-water forming the black wash, as a very beneficial application, exhibiting the cinchona internally, with generous diet.

The *proximate cause* of inflammation puzzles our excellent lecturer, as it has puzzled all preceding ones. He looks upon the process itself, as generally a salutary effort of nature to rectify some unnatural state of parts. Sir A. observes, that there does not appear to be any evident action in the vessels of an inflamed part on the blood which they receive. "This action would appear to be in the surrounding parts." "If this be an important part, (an 'important *fact*,' as the reporter absurdly has it,) it extends to the cens rium and heart itself, and causes the constitution to sympathize in severe injuries." 24. We perfectly agree with Sir Astley, that the first link in the ratio symptomatum of inflammation is an *irritation* or increase of susceptibility in the nerves of the part, which soon draws after it the affection of the sanguiferous and seriferous vessels. In the *treatment* of inflammation a great variety of admirable rules are laid down by the lecturer. We cannot but attribute to the prurient imagination of the notator such sentiments as the following.—

"Another mode of lessening inflammatory action is by perspiration, by which the edges of the crassamentum being drawn towards

each other, and forming a kind of cup, drains the system of its redundancy, and drives the blood to the surface of the body." 27.

After detailing the antiphlogistic means of arresting *acute* inflammation, the lecturer observes, that "when an organ has laboured long under an inflammation, so as to threaten its entire derangement or dissolution, the hydrarg. muriat. with or without Peruvian bark, according to circumstances, has been found beneficial." An instance is adduced in illustration, where a woman at Guy's Hospital had chronic inflammation of the eyes, to such an extent as to produce an opacity of the cornea. The common remedies were tried in vain; when, after taking the above medicine, the opacity of the cornea began gradually to diminish, and in a few days the inflammation subsided. The mercurial, in this instance, was combined with decoction of sarsaparilla.

In passing over a great many lectures, in every page of which we recognized the masterly observations or peculiar opinions of Sir Astley Cooper, we were struck with a remark, at page 75, where the lecturer reprobates the too common practice of opening a stump in three or four days after amputation, to see how it goes on. A stump should never be opened before the eighth or ninth day, *unless* from great pain in the part, which may lead us to suspect that the discharge cannot make its exit. On this account, intervals should be left between the adhesive straps.

In the 8th lecture on punctured wounds, we observe that Sir Astley attributes the bad effects ocaasionally taking place among students of anatomy from cutting or picking their fingers, not to any morbific matter introduced into the wound, but to the irritability of the person's constitution at the time.

Treatment. Cut a piece of lunar caustic into a pointed shape like a point of a black lead pencil, and introduce this into the wound, and cauterize the whole internal surface of it. When this is done, very severe symptoms are prevented from coming on. If this should not have been done in the first instance, from fear of occasioning unnecessary pain, or too great confidence in themselves to be materially alarmed about such an injury, at least dilate the wound; should inflammation and pain have arisen, leeches and fomentations must be applied. The antiphlogistic regimen adopted to its full extent; calomel accompanied or succeeded by saline medicines; opium and antimony must be given at the discretion of the surgeon. From imagining that a putrid diathesis existed, many surgeons were in the habit formerly of giving wine, bark, &c. to correct it, and never allowed that the symptoms resulted from inflammation; the consequence was, that many died under this plan of treatment." 79.

Sir Astley himself suffered, some years ago, from a dissection wound. He called in the assistance of a friend, who prescribed bark and wine. He submitted to this for some time, during which all the symptoms became aggravated. He then changed the plan to antiphlogistic measures, and got well. Sir A. recommends the nitric acid, if the puncture be deep.

In the 9th lecture Sir A. makes some interesting observations on ligatures of veins. He considers this operation as very dangerous. He observes that there has not occurred one instance where the disease (varicose veins) was cured by its adoption, *unless a bandage was worn constantly afterward;* and as this bandage alone will always relieve, if not entirely cure, which it does frequently, it is much better to use a roller and evaporating lotions, accompanied with a purgative medicine occasionally.

In division of the tendo Achillis, whether from a cutting instrument or action of the muscles, the following plan is laid down by Sir Astley.

"The heel of the patient must be raised, and the foot extended as much as possible; in order to secure the foot in this position, a piece of adhesive plaster must be bound circularly round the calf of the leg, but previous to the application of this, a broad piece must be applied from the sole of the foot, over the heel, to the calf, at its posterior part; the circular piece is then to be put on, with the intention of securing and rendering the longitudinal piece firmer in its situation; it is, therefore, to be secured above it. The slightest

apparently lost, but he breathes without impediment. His pulse is rather slow, but on rousing him, or on his making the least exertion, difficulty of breathing and increased motion of the heart come on. Vomiting is generally a striking accompaniment on concussion. If the symptoms of concussion go off in a few days by rest and abstinence, there has been little damage to the brain, further than the immediate shock. The patient, even under such circumstances, should be bled, live low, and take purgative medicines. If the symptoms do not go off in five or six days, it may be concluded that inflammation has taken place, and then the most decided means must, of course, be pursued. "No patient is safe from the effects of concussion, till fourteen days after the accident." We have seen it come on a month, six weeks, and two months after the concussion.

In the treatment of concussion, it is inflammation we have to dread. We are not, of course, to draw blood *directly* after the injury, and before the powers of Nature begin to recover from the first shock. We are to wait until there be some signs of reaction, indicated by fulness and quickness of the pulse—especially of the carotid artery. Sir A. advises the temporal artery or jugular vein to be opened in preference. All the other antiphlogistic measures are also necessary. The head should be kept wet with refrigerating lotions, a large blister applied to the nape of the neck, and sinapisms to the legs.

Compression is thus defined in these lectures.

"The symptoms of compression differ from those of concussion in this, that we find in the former that apoplectic stertor, which accompanies it always in a great degree, and always attended from the first instant with extreme slowness, oppressiveness, and irregularity of pulse; the loss of sense and voluntary motion is not *immediate*, as in concussion; it comes on *gradually*: the limbs are pliant, from the relaxation of the muscles: the pupils of the eye are much dilated." 148.

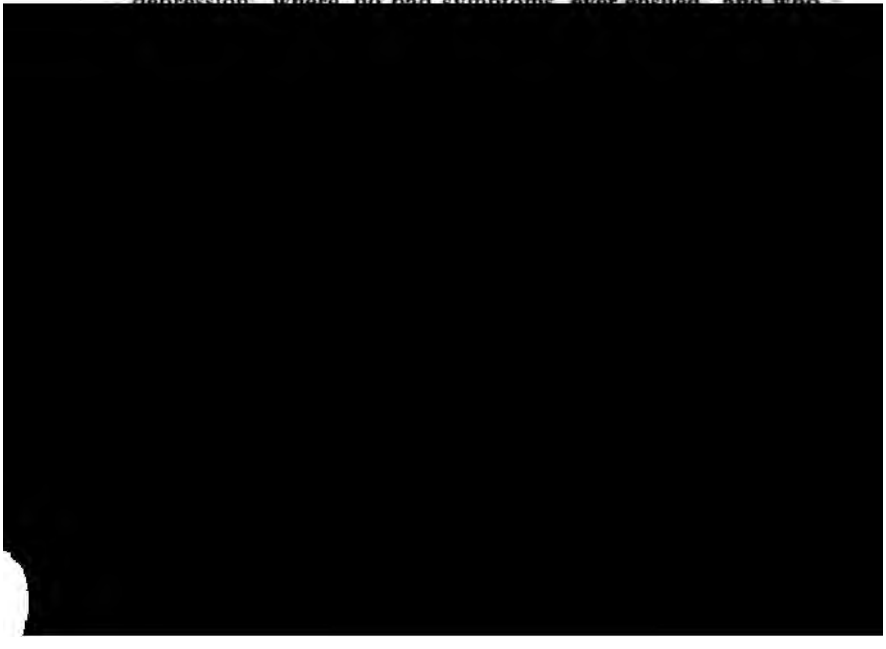
It is evident that pressure on the brain may take place from extravasation of fluids, blood, or serum—from depression of bone—or from formation of matter. The lecturer does not notice compression from turgescence of the vessels themselves, though this very often takes place in apoplexy, and also in cases of injury from external violence. Such an effect does not, however, come so often under the surgeon's as the physician's notice. Blood-letting, of course, is the mainspring of the treatment here as well as in concussion. If the symptoms do not yield to bleeding and other active measures, the trephine should be had recourse to, though this

operation will be unavailing if the extravasation be under the dura mater or in the substance of the brain. On the Continent the trephine is almost given up, and in this country it is far less frequently applied than formerly. We should examine the head very attentively, and where pressure gives the most uneasiness there the scalpel should be applied. "After having made the opening with the scalpel, if we should *not find* the pericranium *detached* from the skull, (which will be the case if there is any fluid between the dura mater and cranium,) I do not conceive we are warranted in proceeding any farther." Sir A. makes one exception to this rule—which is, where a blow has been received on the lower part of the parietal bone, just where the artery enters. In dissection of these cases a fluid is often found extravasated between the dura matral artery and bone.

In fractures of the cranium we should deplete well, and few, comparatively, will require any surgical operation. If there be depression of bone and symptoms of extravasation, then, of course, we are authorized to apply the trephine, or such other instrument as may elevate the depression.

"In *compound* fractures, with depression, it will be proper to trephine, whether there are any existing symptoms (of compression) or not—on the principle of preventing succeeding inflammation."

We confess that we should not be inclined to adopt strictly the above rule. We have seen very many fractures with depression, where no bad symptoms ever ensued, and who-



and produced mortification and death. In such unfortunate instances, Sir A. recommends an incision to be made, and common water injected to lessen irritation. In young people there is danger of the injection passing into the abdomen, when the tunica vaginalis communicates with that cavity. The operation either ought not to be performed till the patient grows up; or the case should be treated, at first, as hernia, pressure being made on the mouth of the tunica vaginalis, by means of a pad, till adhesion took place. When this happens the disease may be treated by injection, as in the adult.

From the 17th lecture, we shall extract a passage containing Sir Astley's statement of the formation of aneurism.

"The appearances that aneurism presents before the parts yield, are these: the coats of the artery are much thickened, of a yellowish hue, and opaque, as if they had been subject to an inflammatory action from an injury, or disease, by which they become weakened; the thickness, with its opacity, is owing to the lymph thrown out; the part is commonly tender to the touch, and easily broken down by pressure. After this, a process of absorption commences opposite to where the opaque spot is, coagulable lymph is effused, and the circulating blood pushes this before it. Hence, the sac in aneurism is formed by the fascial sheath on its outside, and by the coagulable lymph on its inside. As it increases in size the sheath becomes absorbed, the coagulable lymph soon yields, and the aneurism forms a sac with whatever is next in contact, till it reaches the skin, and through which it ultimately bursts; hence it would appear, that aneurism is *not the result of the yielding of the coats* of an artery, but *from the absorption*. If the artery be seated near a bone, it would appear that the whole circumference of the tube is not equally absorbed, and the expansion of the tumour is confined more to one side; in other cases the expansion is more uniform." 171.

In the 18th lecture Sir Astley appears to prefer puncturing the bladder above the pubis rather than through the rectum. The last operation of this kind we saw performed, was on the former printer of this journal, Mr. Thorne, by Mr. Abernethy. A canula of elastic gum was kept above the pubis *for some months*, during which time not a drop of water came by the natural passage, and the patient was easy. At length the urine came away partly through the fistula above the pubis, and partly per urethram, which state continued till death from diseased bladder and prostate.

Upon ischuria Sir Astley makes many valuable observations. It is well known that retention of urine is generally caused by or complicated with a stricture in the urethra. In such cases Sir Astley observes that he should not think of

puncturing the bladder, but cut beyond the stricture, and thus give vent to the urine.

"As soon, therefore, as I should perceive the urethra to be considerably swollen and enlarged, I should direct the patient to make a violent effort to void his urine; at this very juncture, place your finger upon the perineum, and the tumour and fluctuation will be very evident, and here the incision is to commence: another similar exertion, as just stated, is to be then made, and the tumour being again distinctly felt, there will be no difficulty in proceeding with the further necessary incision, going on, as it were, mechanically. Another method, and one very easy, is to pass a staff into the urethra, as far as the stricture, (for it will go no farther) then cut down and lay it bare, then divide the stricture in the direction of the groove of the staff, carrying the knife towards the arch of the pubis." 217.

The chapters on hernia and dislocation are valuable, as may easily be imagined; but Sir Astley's regular publications on these subjects are, of course, the proper sources for information.

Speaking of gonorrhœa in the 29th lecture, the lecturer directs that, in the inflammatory stage, a purgative, composed of six grains of extract of colocynth, should be given every night, and two drachms of the sulphate of magnesia with a scruple of nitre every morning. The patient should drink plentifully of barley water, mucilage of gum arabic, linseed tea with nitre, &c. Low living, soda water for common beverage, open bowels, venesection if the symptoms run high, are proper. When these and various other antiphlogistic and sedative means have subdued the inflammation

obvious errors, that we cannot conclude otherwise than that they exhibit an exceedingly imperfect, not to say erroneous, view of Sir Astley Cooper's prælections. Another insuperable objection is this, that the annotator speaks so frequently in the nominative case, and jumbles in the same page such a variety of lecturers' names, that it is, in general, quite impossible to ascertain whose sentiments we are perusing. With the exception of these defects, the work contains a great mass of very important practical matter. It is greatly to be wished that the able surgeon, whose lectures are here garbled and defaced, would employ an amanuensis to revise and print them in a form and state worthy of the man who has so long delivered them orally to crowded audiences in the great school of which he is so distinguished an ornament.

IV.

PRESENT STATE OF MEDICINE IN ITALY.

1. *Della Nuova Dottrina Medica Italiana, &c.* Del Professore G. Tommasini, Firenze, 1817, pp. 98.
2. *Dell' Infiammizione e della Febbre Continua-considerazioni Patologico-Pratiche.* Di G. Tommasini. Pisa 1820, pp. 272.
3. *Prospetto De' Resultamenti ottenuti nella Clinica Medica della Pontificia Universita' di Bologna nel Corso di un Triennio Scholastico. Discorso premesso alle Lezioni Medico-pratiche dell' anno Scholastico* 1819, 1820. Dal Professore Giacomo Tommasini. Pisa 1820, pp. 48.

Although the avowed and actual object of this Journal is, to present to its readers an analytical record of practical medicine, as exhibited in the never-failing produce of the press;—neither we, nor our patrons, are so strait-laced as to sacrifice all other considerations of curiosity or interest to that of mere practical utility. When wearied, therefore, with the everlasting labours of our diurnal calling,—in copying in miniature on our pages, the full-length pictures that meet our eyes, on all sides, from the pulse-feeling fingers of practical men,—we take no shame to ourselves, nor think it requisite to crave the pardon of our readers, if we occasionally indulge ourselves, and them, with sketches of a less sombre and a lighter character. Of this class is the notice which we take, from time to time, of those theories and speculations, which, God knows, will never be of any other practical benefit, but that of keeping the blue devils from their authors,

during the period of their concoction; and "which play round the head, but come not to the heart" of such musty subjects as ourselves, whose taste and talent for theory have long been spoilt by the ill-mannered and uncourtly obstinacy of vulgar disease. Of a kindred, but less futile, class of subjects are those, which relate to the state of medical opinion and practice in different countries: the progress of medical literature, and the biography of illustrious men. To the former of these subjects, the present sketch will be devoted; and we leave the interest, if not the utility, of the details to plead for themselves.

Italy—the very name of Italy—must possess an interest and a charm to all that look upon that lovely and famous land, whatever be the object of their contemplation or inquiry. Our early intimacy with the nations of classical antiquity, through the proxy of their immortal authors, gives them peculiar claims to our attention; and, from the identification of feeling with the objects of regard, which can only arise in the generous breast of youth, we can never look upon them afterward, even in their evil days and most degraded fortunes, but with a tenderness partaking of the love for a native land. It cannot, therefore, be supposed, that our fraternity, whose official language is still that of ancient Rome, can look with indifference on the existing condition of their profession in Italy. And it must be delightful to them, and to every friend to humanity, to know, that the present state of medical science in that country is, comparatively with former periods, most flourishing. In fact, it is such, as to bear comparison with that of any country in Europe; and is certainly very superior, both in principle and practice, to that of the great majority of continental states. This comparative excellence, however, is, as we shall shortly see, of no very ancient date; and the whole science may be truly said to possess, at this very moment, the boisterous vigour and noisy zeal of youth.

Italy has always been the prey of conquerors; yet none of her masters ever established a more complete authority over her political fortunes, than one of our own countrymen extended, some time ago, over her medical independence. John Brown, (like his gifted countryman Robert Burns, at once the glory and disgrace of Scotland,) was destined to receive from foreign nations the unbounded honours, to which both himself and his friends considered his genius as entitled; but which were most pertinaciously withheld from him in his native country. While he was struggling for existence in Edinburgh, against the cabals and persecutions of his opponents, and the more fatal array of his own violent and ill-

regulated passions;—or was subsisting in London on the charity of his few remaining friends,—with no patients, and scarcely a disciple;—his *New Medical Doctrine* was spreading like wildfire over the Continent; and in Italy, more especially, was subduing to its influence, alike the truths and errors of former systems, and fixing itself, like a delightful and unresisted spell, on the minds of the younger members of the profession. In a very few years after the death of its author, while the slight impression which the New Doctrine had made in England was (with the exception of some of its principles, which can never die,) almost entirely effaced, in Italy the whole of it was established as the catholic rule both of reasoning and practice.

It is needless to observe that the author of such a revolution must have been a great man; and it is equally needless to deny that, *as a system*, that of Dr. Brown equals, if not exceeds, in originality and ingenuity, any that have been promulgated in medicine. No one will, assuredly, accuse us of being Brunonians; nor will those acquainted with our critical labours, believe us capable of undertaking the merits of Dr. Cullen; yet we conceive it will be now universally admitted, that the merits of the latter, as a theorist, are insignificant when compared with those of his great but unfortunate rival. But for the extreme value of his admirable practical writings, the name of Dr. Cullen would only now be ranked in the class of minor speculators in medicine. Brown, on the contrary—Lio Scozzese—the great Scotsman, as he is called in Italy,—like the sculptor of antiquity, who engraved his own emblem on a part of one of his immortal works,—has so deeply impressed the stamp of his genius on medicine, that it can never be effaced, but by the destruction of the science itself. And yet, however humiliating the confession, we must admit, that his doctrine has been the source and sanction of a practice most injurious to mankind The offspring of a mind more versed in abstract science than in practical medicine, its beautiful simplicity was, in few cases, adapted to the explanation of the complicated phenomena of disease; and, even when just, its principles, when rigidly followed in practice, often led to the most fatal consequences. As necessary inferences from the doctrine of excitability, it followed that almost all diseases either were originally, or speedily became *asthenic*, or of *debility*, requiring stimulants for their cure; a class, which was still farther enlarged by that part of the doctrine, which considered general diseases as of the same nature as their causes,—and local affections as necessarily of the same nature as the existing diathesis,—*sthenic*, or *asthenic*. Accordingly, in Italy, during the dominion of Brown-

ism, all fevers, all acute inflammatory affections in their latter stages, and all chronic inflammations, were considered as diseases of debility, and treated with stimulants. The consequences were such as we can now very easily conceive. And it is, perhaps, on the whole, fortunate, that the doctrine and practice of stimulation were carried to the extreme they were; as the glaring and disastrous results eventually sufficed to open the eyes of the profession to the true state of things before them, and induced those to listen to the pleadings of nature, whose ears had been too long closed by the enchantments of a false philosophy.

Signal and complete as was the triumph of the Brunonian system in Italy, still, it is not to be supposed that it was effected without opposition; nor that there were wanting here, as in other conquests, some stubborn spirits, who still clung to ancient opinions, and yielded a willing homage to the names and objects of former veneration. It was not, however, before the year 1800, that any thing like a systematic opposition was made to the established doctrines. And this appears to have been first done by *Rassori*, in his work on the epidemic petechial fever of Genoa. This was followed up by many publications of various physicians, in different parts of Italy; all of which are chronologically arranged in Tomassini's pamphlet. This author, himself, has been for many years, one of the most successful and distinguished opponents of the Brunonian system, and has, by his various writings, contributed largely to the establishment of the doctrine and practice which have now, for several years, very generally superseded it.

This New Doctrine, as it is called,—for the Brunonian, which in the foregoing observations we have been denominating *new*, is now named *the Old*,—is held up by the Italian writers as something original; and its discovery claimed for Italy, as if conferring on it the greatest honour. We shall presently see, however, that its principles are a mere modification of the systems of Brown and other theorists, and its practice in a great measure such as has been established for many years in this country. This, indeed, is distinctly avowed as the child of Brownism, but of a regenerate branch, and purged from all the frailties and vices of its sire.

The following is the pompous style in which it is announced in our author's pamphlet.

"The New Italian Medical Doctrine has created an epoch, and will undoubtedly hold a distinguished station in the history of medicine. The offspring of Solidism and Brownism, it is more simple than the doctrines of Hoffman, Baglivi, or Cullen, inasmuch as it abjures the many fruitless suppositions and questions which so long

perplexed the followers of these great men, involving them in the obscure research of causes, and misleading them from the more tranquil study of effects, and from that plain method of induction which can alone be the groundwork of the medical art. The new doctrine is better calculated than the Brunonian to inspire confidence at the bed-side of sickness, because it does not reject many of the old and established modes of treatment. because it proscribes all abstract opinions, and because, having grown up more in practice than in study, it rejects many of the palpable errors which the pride of theory maintained against the commonest observation of facts." *Della Nuov. Dott. p.* 3.

"This new Doctrine," he says in another place, "was born in Italy; on this soil, ever fruitful in useful discoveries in every branch of science and art, it has grown up; and it looks to the united zeal of Italian physicians for its highest possible perfection." *Ib. p.* 43.

In Italy, the very great contrast between the new doctrines and the old,—and yet more, between the new practice and the old,—naturally give to the former a great appearance of novelty; but in this country, in which the Brunonian system was never prevalent, these pretensions cannot but seem overstrained.

This will appear sufficiently obvious, from the following brief sketch of the New Doctrine, which we shall give without noticing, in general, its relation to former and existing systems.

Agents are conceived to operate on the living system in two different and opposite ways; the one set (the *stimuli* of Dr. Brown) exhausting the excitability, and thus producing excitement; the other (the *sedatives* of the Cullenian school) lessening the excitement without any previous or accompanying stimulant operation whatever, and in a manner equally direct and independent. The forme class of agents are called *stimulants*, the latter, *contrastimulants;* and the general state of the system, or *diathesis*, produced by their respective operation, is called *stimulant* and *contrastimulant.*

The immense Brunonian class of diseases from indirect debility is reduced, in the new system, to a very insignificant number indeed; and the great influence of this, as a general source of diseases, is declared an illusion. Thus almost all fevers, and all inflammatory affections, in every stage, are considered, by the new school, as uniformly and invariably sthenic. In the New Doctrine, the nature of general diseases is considered (in opposition to the scheme of Brown) to have no necessary dependence on the nature of the cause; and local affections no necessary similarity to the existing diathesis. Thus, a sedative power may give rise to a disease of excitement, and an accute local inflammation may arise in a most debilitated system.

The class of agents named contrastimulants are thus described by Tommasini:—

"They act on the living fibre in a manner directly the reverse of stimuli, and immediately produce those effects on the excitability which Brown derives negatively from the diminution of stimulation. They remove the effects of excessive stimulation, and without any (necessary) evacuation; and, when used in excess, produce diseases which can only be removed by the use of stimuli: in their remedial effects, therefore, they operate like blood-letting and purgatives, and other evacuating measures."

The two classes of agents, stimulants and contrastimulants, reciprocally correct each other's effects. The measure of the existing diathesis is afforded by its capacity to bear agents of the opposite class; and this degree of tolerance is a much better index of the nature and degree of the diathesis than the symptoms are.

A condition of the system neither stimulant nor contrastimulant may exist, consisting rather of a disturbance of action, than of an increase or diminution of action. This state is called *irritation*, and the diathesis *irritative*. The number of diseases depending upon this state are very few; the great majority belonging to the stimulant diathesis.

Pain, and certain other nervous affections, exert a great influence in modifying diseases. In acute diseases, these sensorial affections often act as contrastimulants, forbidding, for a time, the employment of other contrastimulants, which are indicated both before their occurrence and after they have passed off.

In the new doctrine, the phenomena of inflammation hold a most conspicuous place; and as well on this account, as because the subject can never be too much impressed on the minds of practitioners, we shall notice this part of the system somewhat more at length. With this view we shall avail ourselves of the larger work on inflammation, by Tommasini; and, in glancing over it a second time, shall put down a few of the more prominent subjects discussed, in the order of their occurrence, and without much connexion.

All inflammation is the simple product of excess of stimulus; all its characters as traceable to this, from the "primissimo rubore" to the extreme of disorganization. All inflammations, therefore, are uniformly, and in all circumstances, sthenic; and as the phenomena of the greater number of fevers, and of all the phlegmasiæ, are (contrary to the dogma of Brown) considered to depend on a primary local inflammation, this doctrine must be of immense importance in the practice of medicine. Perhaps no part, once inflamed, ever *returns* to its original soundness, although it appears to do

so to our imperfect senses. This is proved by the proclivity to disease—or rather the augmented excitability—remaining in a part that has been once inflamed; and is not the less true, although contrary to the usual laws of habit and the Brunonian doctrine of exhaustion. By this means, a new temperament or idiosyncracy, general or local, may be produced. Inflammation in its duration retains no relation to the operation of its cause, but proceeds much less influenced by the state of the general system, than the system is influenced by it. In a case of mere stimulation or excitement, (as in the condition resulting from violent exercise, ebriety, sun-stroke, &c.) the subtraction of the cause removes the effect; but when once *inflammation* is by any of the same causes lighted up, it will hold its course, in a certain degree at least, however the cause be withdrawn. Inflammation is, therefore, an *independent* process; a fact which is farther proved by its arising in the most debilitated subjects, as after hæmorrhages, and in the last stage of febrile diseases. All authors, from Galen to Darwin, with the exception of Brown, considered inflammation as always a state of increased action; the *error loci*, the *spasm*, the *obstruction*, &c. &c. of different systems, being merely the antecedents or causes of the inflammation, like the *thorn* of Van Helmont, or the *stimulus* of Haller. All practical writers admitted the various *kinds* of inflammation, as modified by the varying state of the general excitement, the character of the part, &c. but still they considered the action of the affected part as increased. Brown alone conceived the idea of asthenic inflammation. It is true that two opposite *general* states of the system (diathesis) cannot coexist; but the coexistence of a state of *general* debility with a *local* excess of stimulus, and *vice versa*, is very comprehensible. Although local inflammation is, in a certain respect, *independent* of the diathesis, still it is *influenced* by the latter, and *vice versa*. Thus, if the general excitement be morbidly high, this will augment the local inflammation; if the general excitement is moderate, it will be increased by the local excess of stimulus; and if the general excitement is very low, it will lessen the degree of the local stimulus. It is this last way in which general antiphlogistic treatment relieves local inflammation. In judging of the nature of a disease it is of great importance to distinguish between its primary essential characters, and its ultimate condition, or consequences. Gangrene and sphacelus are assuredly very unlike inflammation in many respects; but there was a time when these very processes were inflammatory and curable, if curable by antiphlogistics. On every account, therefore, both in a pathological and practical point

of view, it is of the utmost necessity to watch the beginning of diseases.

"E duopo abituarci a prevenire con attività i passi ulteriori; ad agir con prontezza, trattandosi di violenti malattie, in que' primi momenti, i soli pur troppo che prestino un filo alla diagnosi, i soli a mio avviso che debbano considerarsi preziosi per l'arte, e per l'umanità." *Dell' Infiammazione, p.* III.

Of the application of these new doctrines to practice, in the Italian school, we are furnished with an interesting exemplification in the third work of Tommasini, named at the head of this article. This, as will be seen by its title, is a brief report of the practice in the clinical wards of the university of Bologna, for the three years ending in 1820, delivered by the author in the form of a lecture to the students. With a transcription of the Professor's list of diseases, and some of his remarks, we shall conclude this article without any further comment of our own. It must appear to all that the new practice is very superior to the old; but many will be disposed to fear, with ourselves, lest it be carried too far, if it has not been so already. The Italians ought to recollect that their country was once before *inflamed* from a neglect of the maxim—*in medio tutissimus ibis*—and pronounced too by the very god of physic.*

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* The doses in which medicines are exhibited by the Italian Physicians, are so enormously large, as almost to exceed credibility. As a specimen we insert the following list, which, we are assured, was furnished by Dr. Carlo Bellati himself, one of the most distinguished of the physicians of the hospital at Pavia:—

Tartar emetic, from half a drachm to three drachms daily.
Extr. of aconite, from two grains to three ounces (he must mean drachms) daily.
Digitalis from two to six grains daily.
Gamboge, from six grains to thirty every three hours.
Cream of tartar, three ounces a day for a month.
Muriate of lime, from a drachm to half an ounce daily.
Extr. of henbane, from two grains to twenty-four every two hours.
Carbonate of soda, a drachm to an ounce daily.
Carbonate of ammonia, half an ounce daily.
Powder of nux vomica, from a grain to one drachm daily.
The same of the extract.

"I can hardly believe," says Rasori, "that the toleration of such large doses of emetic tartar will be attributed to any want of strength in the medicine. The physicians of Genoa know that the tartar emetic of their apothecaries, prepared from the glass of antimony, produces vomiting in doses of two or three grains."

In the management of sthenic or inflammatory dropsies, whether anasarca, ascites, or hydrothorax, Rasori gave large doses of the tartrite of antimony, with nitre and diluents, which, joined to abstinence, were productive of the

LIST OF DISEASES.

	Admitted.	Died.
Acute Inflammations, including 15 cases of rheumatism and eight of exanthemata	209	21
Chronic inflammations, including 13 cases of dropsy	38	5
Synochal and catarrhal fevers	35	—
Synochus, nervous, or typhus fevers	57	4
Severe acute diseases from defect of stimulus	4	—
Simple intermittents, or combined with physconia	45	—
Hæmorrhages	17	1
Convulsions, including two cases of madness	18	1
Asthmatic Affections	4	—
Torpor, hemiplegia, and apoplexy	10	1
Decided irritative affections	10	—
Hydrophobia	2	2
Pellagra	1	—
Vizi strumentali (surgical ?)*	3	—
Total	453	35

"Of the above diseases," the author remarks, "the least severe were the 35 cases of synochal and catarrhal fevers, the 45 intermittents, and the 11 painful, convulsive, or febricular affections, manifestly merely *irritative* in their nature. These last were all cured by the removal of the exciting cause, either by its expulsion or de-

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best effects. Some of the patients took daily seven or eight grains of emetic tartar, with an ounce and a half or two ounces of cream of tartar in divided doses. In other cases, thirty grains of jalap with cream of tartar were given in the same way.

Tommasini, however, acknowledges that diseases decidedly sthenic, and requiring the depletive plan, fall sometimes, in the course of the phlogistic process, into a state of temporary but evident "counter-stimulus," in which they will not bear that depletion before tolerated, and subsequently again required. This state, he thinks, is often produced by pain, and by some other secret pathological condition, not yet detected. *See Bell, in Dr. Chapman's Journal, No. 5, for November*, 1821.

* *Surgical?* We believe *visi strumentali*, which the reviewer has queried, does not mean surgical, but *organic* diseases. In a work of Professor Barzellotti, published last year, he has arranged diseases into two classes—those of increased, and those of diminished action. The latter are subdivided into six orders, the fifth of which contains those *vizi strumentali*, the literal translation of which would be "organic derangements," but which he has thus defined: "Derangements of the functions of the most important organs, (namely, of the brain, heart, lungs, and chylopoietic viscera) which have not been produced *primarily* by any disease in the organs themselves, and which are not symptomatic of any of the other diseases before arranged." He then gives a list of the diseases comprehended in the above term, among which we observe asthma, angina, pectoris, pertussis, &c. &c. &c. *Ed.*

struction. These cases demonstrated not merely the existence of this class of diseases, but proved with what violence of symptoms a simple affection, not possessing any diathesis, can assume the appearance of a severe malady. The great infrequency of similar affections, however, ought to convince us, that, in most cases, the irritative agency of the first cause, however slight or transient, is soon followed by processes that constitute an affection of diathesis, independent of its cause, and no longer curable by its removal. All the *intermittents* were cured, although in many of these, a chronic inflammation of the liver or spleen, required the long-continued use of antiphlogistic measures. We were equally successful in the catarrhal and synochal affections, although many of these exhibited symptoms which would have rendered the application of depressing measures much less steady in the hands of any practitioner who was not convinced (as I have long been) that all these affections, viz. synocha, synochus, and typhus, are mere varieties and degrees of the same disease; and that it is by the employment of an opposite plan of treatment that the simplest synocha is often converted into the severest typhus." *Prospetto*, pp. 21, 22, 23.

In illustration of this last statement, he adds, in another place—

"It is a fact that, during the period when exciting remedies were so much used in febrile affections, nervous and typhus fevers were not only more frequent, but the mortality from them much greater, being never less than 18 or 20 per cent. The diminution of mortality during the latter years, throughout Italy, since the establishment of the antiphlogistic treatment, has been wonderfully great; and we see in the results of the table, given above, that the mortality in nervous fever, in our clinical wards, has been less than eight per cent." P. 25.

He says that acute inflammatory diseases are those most prevalent in Bologna, particularly during the winter. Those admitted into the clinical hospital consisted of a few cases of exanthemata, (which Tommasini considers in all their forms simply as inflammatory affections of the skin and vascular system,) rheumatism, gout, &c. the remaining being affections of the internal viscera. Of these latter, the diseases of the chest were most numerous. Of 115 pneumonic subjects, 14 died; and of the whole 209 cases of acute inflammation, the mortality was 10 per cent. On the subject of blood-letting in these cases the author makes the following remarks:—

"In some cases of uncommon obstinacy, or of relapse, occurring in strong constitutions, the repetition of venesection must keep pace with the pertinacity of the disease. But, in general, I am unwilling to have recourse to an extraordinary number of bleedings, because I am of opinion that there is a term beyond which the continued

application of contrastimulants may be necessary, and yet blood-letting not be so; and because I have found so potent a succedaneum in the use of *kermes mineral, nitre, squills, acetate of potass,* and *laurel water.*" P. 27.

In most cases, he says, even the most severe, he rather trusted to the use of remedies *positively sedative*, than to profuse abstraction of blood. He briefly refers to the particulars of many of these cases, wherein blood-letting and other antiphlogistics were freely used, even in the last stages, and with decided benefit, even in the most unpromising cases. In one instance of a peripneumony arising during the progress of a most severe nervous fever, he mentions the success obtained from "the continued use of the antiphlogistic regimen, even to the last, and in defiance of the mortal symptoms of physiological debility." In a case of what he calls "acute pneumo-trachitis," he says, that "neither the long-continuance of the disease, nor the prostration of strength and emaciation, prevented the continued application of depressing measures, stibiated tartar and kermes in large doses, antiphlogistic beverages, and bleedings patiently repeated;" all of which cured the disease, and prevented the accession of a tracheal phthisis that appeared inevitable. He mentions a third attack of peripneumony in a woman who had been bled *seventeen* times in the former attacks, but who was eventually cured "by the perseverance in the depressing plan, including even venesection." P. 33. In another case he mentions having bled a man *eighteen* times, and with final success. In a case of most severe synochus, he bled *fourteen* times, besides using, at the same time, "various remedies all unequivocally of the class of depressing or contrastimulant." P. 34. We shall conclude with the following case detailed somewhat more at length.

"A woman came into the hospital on the 11th day of a peripneumony, which had been entirely neglected hitherto, and was consequently now very violent. The patient was old, the respiration sonorous, the quantity of expectoration surprisingly great, the pulse small, and the physiological prostration of strength great. In these circumstances, nevertheless—confident in the maxim, (confirmed to me by a thousand cases, and a thousand dissections,) that inflammation is always one and the same, and, where curable, curable only by antiphlogistic means—so far from attempting to excite the depressed powers by stimulants, I employed bleedings proportioned to the patient's condition; and, encouraged by the resulting amendment, repeated them to the fourteenth time, and with complete success."

It may be here necessary to observe, that the bleedings mentioned in the above cases were probably what we should call

very small, although the author nowhere mentions the quantity of blood taken. Dr. Clark, in his excellent and amusing work on the climate of France and Italy, in speaking of the practice of this very place (Bologna) remarks as follows:—

"Their treatment of pneumonia differs chiefly from ours in taking away smaller quantities of blood at a time, which necessarily requires the evacuation to be more frequently repeated. This does not appear to arise from a fear of taking away too much blood, for they seem liberal enough in the use of the lancet. This practice is not peculiar to Bologna. In going round one of the hospitals of Rome, with the physician, we came to a young plethoric man labouring under inflammation of the lungs. He had been in the hospital twenty-four hours, and had been bled three times, twice to seven, and once to six ounces, and had had four blisters applied, one to each arm and one to each thigh. On inquiring what he expected from the numerous blisters, he said they were contrastimulants."—*Medical Notes*, p. 201.

After stating briefly several other cases, no less strikingly illustrative of the new doctrines than the above, he comes to speak of *dropsy*; and it is truly gratifying to find the pathology and practice in this disease, lately so much the subject of investigation in England, so well understood in Italy.

"Neither is the dropsy curable by any other means, when it is the result of the chronic inflammation of the viscera or glands, or of the superficial phlogosis of the internal secreting surfaces, as is the case in the greater number of instances." P. 43.

"But were there no examples of *asthenic* diseases, namely, diseases produced and maintained by defect of stimulus, or by the *diathesis of contrastimulus?* Such diseases assuredly were very few, as may be seen from the table. This is no fault of ours; but the fault of an erroneous theory that formerly led men to see things otherwise than they were in nature. To prove the rarity of such diseases, it is enough to mention the single fact, that of a hundred dead bodies, of all diseases, 95 will exhibit either actual inflammation, or its traces, or its relics." P. 44.

But we must here conclude this already too extended article—congratulating the medical profession on the progress of a sounder philosophy and practice throughout the world, —congratulating Italy, more especially, on the superiority of her therapeutics over those of many of her continental neighbours—and expressing an earnest hope, that the present fervour of her sons in the cause of contrastimulants and antiphlogistics, may not lead them beyond the bounds of prudence—to be again the victims of their misguided zeal, and to afford once more, amid the ruin wrought by their errors, the occasion for *yet another new doctrine*, to flourish and to fall, like those that have preceded it.

V.

Observations on those Diseases of Females which are attended by Discharges. Illustrated by Copper-plates of the Diseases. By CHARLES MANSFIELD CLARKE, Member of the Royal College of Surgeons, London. Part II. Octavo, pp. 243. Four Plates. Longman, London, 1821.

"Helleborum frustra, cum jam Cutis Ægra tumebat,
"Poscentes videas;—venienti occurrite morbo."—*Pers. Sat.* 3.

THIS work was long promised by the author, and anxiously expected by the profession. The majority of medical works, nowadays, are written to *procure*, not to *record*, practice, like a surgeon, some 20 years ago, who advertised a book *in the press*, on a particular operation, in order thereby, to get some cases to compose the work, not really commenced in manuscript! When, therefore, a practitioner, of Mr. Clarke's standing and experience, condescends to lay open the results of his observations to the public at large, we naturally attach a comparatively high degree of importance to the publication, as one that will not be likely to lead us astray, though it may fall short of the expectation which we too sanguinely indulge, respecting the productions of men standing high in professional rank and reputation. The name of Clarke, too, has long been associated with obstetric studies and pursuits, the gifted brother of the present author having left an indelible impression on the minds of all his numerous pupils. Alas poor Yorick! He, whose wit so often set the class-room in a roar, is now, in his turn, chap-fallen and silent! A few years more, and those who still cherish his memory, will also sink in the tide of time, never to rise again! But it is useless to repine. The whole frame of Nature and all its minutest parts are undergoing the same revolutionary process, and eternally changing forms, by an irresistible action and reaction of their own constituent elements. The sea sends forth its rains, that soften, and wash, and wear down the hardest rocks, and highest mountains; while these debris in time accumulate, and encroach on the dominions of the ocean. Changes and contentions of this kind, are going on in every thing, from the continents and seas of the earth, to the solids and fluids of an animalcula. Man, with all his towering intellect and proud prerogatives, falls into the mysterious circle of transmutation, and nothing is permanent in this world, but the laws which govern its instability!

The first volume of Mr. Clarke's work has now been long before the public, and its contents well known. In the present volume, our author has entered into the consideration of many diseases which, he thinks, have hitherto been but imperfectly discriminated from one another, and treated with little regard to any principles. Mr. Clarke justly observes that, although many of these diseases are invariably fatal, yet the acceleration or retardation of their progress depends upon the knowledge of the practitioner. Many of them, too, are accompanied with great pain—and, whether that pain is to be aggravated or subdued—whether the patient is to be allowed to expire in torture, or slide into eternity with mitigated suffering, will be determined by the information of the medical attendant, and his acquaintance with the means of diminishing those physical ills to which humanity is subject. These are cogent reasons why the medical practitioner should allow no opportunity of augmenting his knowledge to pass unimproved. Neither should he proudly and obstinately rely on his own observations alone, but listen meekly to the suggestions and remarks of others also; for it has been wisely said, that as "the greatest friend of TRUTH is Time, so her greatest enemy is *Prejudice*, and her constant companion, *Humility*."

Mr. Clarke has comprehended all the discharges from the vagina under the following five heads, *viz*, Transparent Mucous Discharge—White Mucous Discharge—Watery Discharge—Puralent Discharge—and Sanguineous Discharge.* The *first*, or Transparent Mucous Discharge, has been treated of in the preceding volume, and to that we must refer. Our next subject, therefore, is the—

1. *White Mucous Discharge.* Our author has defined this to be opaque, and perfectly white in colour, resembling a mixture of starch and water, or thin cream, easily washed from the finger, and capable of diffusion in water, rendering the latter turbid.—This discharge appertains to but one morbid state of the uterus, but characterizes that state very constantly. It probably results from a morbid state of the glands of the cervix uteri, for when pressure is made upon that part, the woman complains of considerable pain. The examination of this discharge should be made when the patient has been some time quiet, for the *transparent* mucus, if

* Mr. Clarke very properly excludes from his classification, gonorrhœa, for what could be more absurd, than to term that a "disease of *females*," which is equally common to both sexes?

so abundant as to run over the labia (where there is some degree of friction in walking) becomes also opaque and white —probably from the entanglement of air globules with mucus. Such a mixture, however, of air and mucus, will *not* render water turbid. The white mucous discharge is often thicker than cream, having the consistence of glue, corresponding with the mucus separated from the cervix uteri, at the commencement of labour. When possessed of this degree of tenacity, it does not flow spontaneously, but generally when there is some straining at stool. It may, however, by remaining in the vagina, become mixed and attenuated with the mucus of that part.

It is at all times desirable to ascertain the real nature of a vaginal discharge, for the white mucus in question is often mistaken for pus, and thus the patient and practitioner are harassed with the dread of a formidable disease. Women are most liable to the white opaque discharge between the age of 20 and 45. Mr. C. thinks it not unlikely, though he speaks cautiously, that this secretion from the glands of the cervix uteri, may be a forerunner of some of those important diseases of that part, as carcinoma for instance.

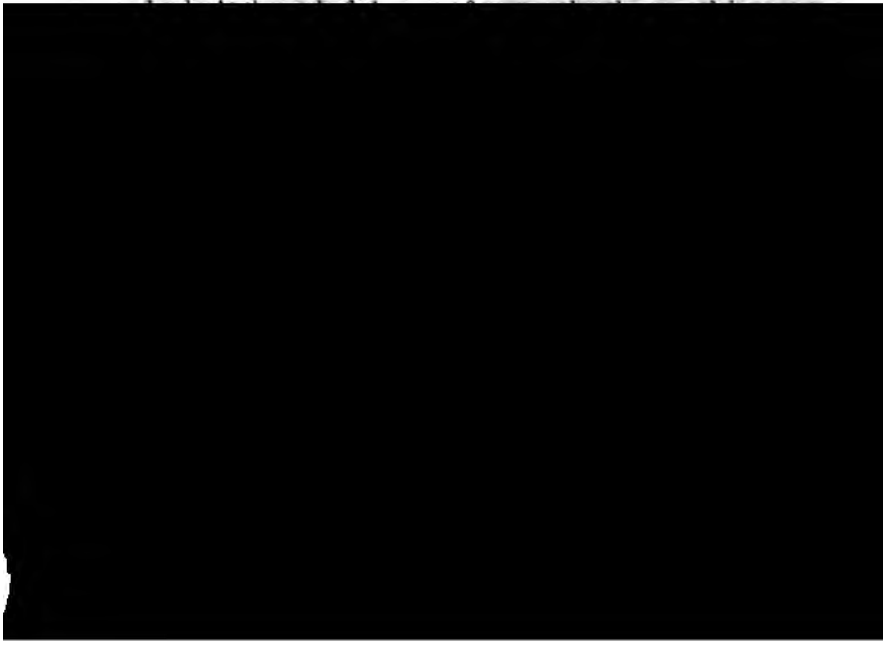
"The constitution is rarely affected in this complaint, the action of the heart and arteries is not increased, and the functions of health are seldom interrupted.

"The menstruation is seldom affected, but it proceeds as it was accustomed to do in such persons. In some instances, painful menstruation has been present. Where an examination per vaginam has been made, the external parts and the canal of the vagina have not possessed a more than ordinary degree of sensibility, but upon the finger reaching the cervix uteri the patient has complained of pain, and the uneasiness has been compared to that which has been experienced upon the passage of an evacuation from the rectum; pressure in both cases being the cause of the pain. There is, however, no alteration of structure in the part: no thickening, no peculiar enlargement of the os uteri, no breach of surface; the portion of the vagina which is reflected over the cervix uteri possessing its usual polished and smooth state." P. 11.

Our author is now confident that wherever the white mucous discharge is present, there will be found, on examination, a tenderness of the cervix uteri, which will be removed, or relieved by the mode of treatment hereafter to be described. Some cases, however, resist all treatment, and at length wear themselves out—in many instances preventing impregnation during their continuance. Here our author relates a case, which we shall give in his own words.

"A lady, about twenty-five years of age, who had been married two or three years, but who had never fallen with child, complained

of a considerable degree of uneasiness at the extremity of the back, near the os coccygis; on this account she indulged much in the horizontal posture. She had also been liable for some years to a discharge from the vagina, which, on investigation, was ascertained to put on a white appearance: the general health was tolerably good, excepting that at the periods of menstruation great pain was felt at the bottom of the belly, which lasted for twenty-four hours, during which time the menstruous discharge did not flow freely, but was pale, and occasionally mixed with portions of a stringy substance. On account of the discharge, astringent injections had been employed by a practitioner, who had been consulted, but without any effect upon the complaint or its symptoms. Tonics had also been exhibited without any advantage. An examination being allowed, the uterus was found unusually low, and the neck of it possessed a much greater degree of sensibility than is common; so that, pressure being made upon it, the patient complained much; but this increased sensibility did not extend to the neighbouring parts, neither was there any alteration in the structure of the parts. This lady had been in the habit of taking much riding exercise, and it is more than probable, that to this cause was to be attributed both the tenderness of the cervix uteri, and the descent of the whole organ. Prolapsus uteri being a very unfrequent disease in women, who have not borne children, the patient was desired to lose several ounces of blood from the loins, to live temperately, to avoid riding exercise, to take only a sufficient quantity of walking exercise to keep herself in health, and to inject some tepid water into the vagina. Sexual intercourse was of course interdicted. Soon after this plan was instituted the symptoms diminished. On account of the painful menstruation, some diaphoretic medicines, with opium, and the use of the hip bath, were recommended, and the sufferings at the periods were sub-



remedy for the inflamed cervix uteri, made an incision into the parts, and dissected out the tumour. The hæmorrhage was excessive, but was stopped by plugging the vagina. The wound granulated, and the sore healed. The discharge stopped, and the uterine tenderness ceased. Six years afterward, our author and Dr. Maton were consulted on the case of the same female. The pressing symptom now, was a distention of the bladder, without the power of expelling its contents. The urine was drawn off by the catheter, and on carrying the finger into the vagina, the uterus was found enlarged to the size of an orange, and having fallen backwards into the hollow of the sacrum, its cervix made pressure on the meatus urinarius. In consequence of continued intemperance, chronic enlargement of the liver had also taken place, the skin of the patient having assumed a dirty appearance Profuse menstruation had come on, and increased the debility. The termination of such a combination of symptoms may be easily prognosticated.

"In the preceding history may be traced the progress of a disease at first shown only by increased action of vessels, which was removed by blood-letting and by rest, for a time: but the flame, though subdued, was not extinguished:—ready to be lighted up, upon the application of those exciting causes, debauchery and intemperance, it was rekindled; and, in all probability, at a period not very distant, will consume the frame which engendered it." P. 18.

Encysted tumours are not unfrequently met with in the neighbourhood of parts where increased action is going on, as in the labia, and in the cellular membrane about the vagina, when local inflammation has existed in the vicinity. A case in illustration, which had been under Mr. Freeman, of Spring Gardens, is related at page 19, which was shortly this. A young healthy woman being married nine months, found her health begin to decline, and the intervals of menstruation to be protracted. Sexual intercourse was painful, and there was a discharge of whitish mucus from the vagina, at the upper part of which, there was constant uneasiness. On examination, a tumour, the size of a walnut, was found on the left side of the vagina, and was lowered by the patient's straining. The cervix uteri was painful when touched. The constant irritation of the parts, kept up general increase of the circulation, and this produced some degree of emaciation. As the tumour evidently contained a fluid, it was punctured with a lancet, and a clear liquid escaped. Treatment for diminishing the local increased action was pursued, and perfect rest was enjoined. In a few days, the tenderness of the cervix uteri was nearly gone—the milky discharge ceased, and *the patient* shortly regained her health.

Our author gives a case to show that the constitution sometimes sympathizes, though not very often, with the local irritation. A married lady had, for some time, been suffering from pain at the bottom of the back and abdomen, which continued to increase, for a few days, at the end of which, a violent paroxysm of fever took place, which was repeated in some hours afterward. Twelve ounces of blood were taken and exhibited the inflammatory appearances. Salts and senna were exhibited, and on the surface of each evacuation, the patient observed a quantity of substance, resembling a solution of isinglass. This was discovered not to come from the rectum, but was squeezed out of the vagina, after the fæces escaped from the anus. When the bowels were evacuated, small doses of antimony and mercury were given, and the patient kept to her room on abstemious diet. The pain now abated, the glutinous discharge from the vagina ceased, and the excitement of the system subsided.

The above cases will be sufficient to illustrate the subject. We shall now exhibit a sketch of our author's therapeutical indications in a general way.

Local blood-letting, by cupping or leeching the back or groins, repeated according to circumstances, forms the basis of the treatment; and where symptomatic fever presents itself, venesection is proper, though seldom necessary. The hip-bath is a useful remedy, and the patient may sit in it twice a day, at the temperature of 90°. Where this last cannot be procured, fomentations to the back or abdomen, are serviceable. Tepid water thrown into the vagina with a syringe, constitutes a direct fomentation to the part affected. The bowels are to be kept in a relaxed state by small doses of magnesia, in plethoric habits;—in languid constitutions, castor oil may be preferable. No drastic or irritating purgatives should be given. At bed-time, it is proper to exhibit some medicine that may determine to the surface, and, at the same time, tranquillize the system. Thus, five grains of Dover's powder, and three of camphor, may be given with a nauseating draught. If strangury be considerable in degree, a larger dose of opium will be necessary, such as 60 or 80 drops of laudanum, and smaller doses frequently repeated afterward, with mucilaginous drinks. Whenever the bladder is unequal to the expulsion of its contents, the catheter should be used, lest inflammation be superadded to irritation. We should never trust to diuretics, as nitric ether, and steaming with warm water, in these cases. Although it is not often necessary to keep the patient in bed, yet the horizontal position should be persisted in for some time, and all new causes of irritation avoided.

The disease which most nearly simulates the above is—*Inflammation of the Unimpregnated Uterus.* In this, besides the pain arising from local inflammation, which, of course, is *permanent*, there will be occasional pains, which come on and retire after the manner of early labour pains. Besides, a milky discharge from the vagina does *not* accompany hysteritis, in which complaint pressure above the pubis greatly aggravates the pain.

Hysteritis is not an uncommon disease, Mr. C. thinks; nor is it attended with symptoms so acute as might be expected when the unyielding texture of the uterine muscular fibres is considered. It must be recollected, however, that the uterus is not a very sensible part, (with the exception of its cervix) and that it is well defended from pressure by the pelvic circle of bones. In the *impregnated* state these circumstances are all very different—there is then a greater extent of inflammation—the nerves and blood-vessels of the organ become enlarged—and the part is constantly under the influence of pressure from the abdominal and diaphragmatic muscles. Hysteritis in the unimpregnated state is most frequently called into action by local violence—and is not an uncommon consequence of marriage. Cold also may originate it. It is attended by a constant uneasiness referred to the pelvis, which gradually increasing, though seldom intensely violent, yet gradually interferes with the comfort of the patient, who complains of pain at the bottom of the abdomen or back. Besides the permanent pain, there are occasionally violent paroxysms of it, at irregular intervals—a phenomenon common to inflammation of most muscular organs, as the stomach, bladder, &c. In the unimpregnated hysteritis the circulation is seldom much accelerated, nor is there much hardness in the pulse, or increased temperature of skin. The tongue, though not clean, does not show that slimy whiteness so constant an attendant on peritonæal inflammation. The disease lasts a long time if not interfered with, the symptoms suffering an exacerbation before each menstrual period, and a diminution afterward. In some cases the menstruation is suspended, and the symptoms aggravated. In inflammation of the substance of the uterus, and where the peritonæal covering has not participated, the blood drawn from a vein seldom shows the inflammatory crust, nor is the relief commensurate with the activity of the means, or answerable to the expectations of the employer. Topical blood-letting is more advantageous. Scarifications and cupping-glasses to the sacrum—a dozen of leeches to each groin, or across the pubis—and immersion of the hips in warm water, are the appropriate measures. At the end

of a week, the local bleeding should be repeated, and in the intervals of menstruation a dozen of leeches to the neighbourhood. Twice or thrice in the 24 hours a fomentation, composed of decoct. anthemidis and tincture of opium, an ounce of the former to a quart of the latter, should be applied, and if the symptoms do not seem disposed to yield, the patient should be kept in bed, and small doses of antimony in a saline draught exhibited once in four or six hours, with three or four drops of tinctura opii. Purging is eminently useful in allaying inflammatory action, and therefore should not be neglected. Salts and senna every second morning are recommended by our author. The diet, of course, should be light and unirritating.

The general state of the health should be attended to, and the regularity of the menstrual secretion. We believe, with our author, that much mischief is daily done by the routine practice of administering what are termed emmenagogues in all states and conditions of menstrual irregularity. Most of these emmenagogues are either general or local stimulants, and consequently cannot be proper in the various conditions of obstructed menstruation. Well may our author observe, that "prejudice has occupied the place of science, and popular nostrums have been exhibited, often without, and sometimes with, the concurrence of the practitioner." Every attentive observer knows that, if there be cases of obstructed or suppressed catameniæ, where the fluid is tardily secreted from local or general debility, there are many other cases in which an opposite state of the frame becomes the cause of their production.

"Instead then of resorting to such measures, to the employment of the whip and of the spur in such cases, (where if they do any thing they do mischief,) let the morbid peculiarities of the constitution, and the habits of life of the patient be taken into consideration; let the first be counteracted, the second be improved; let the sanguine have her excess of fulness diminished, let the debilitated have her powers augmented; in short, let the general health be amended, and the functions of health will be restored." 39.

Accidental circumstances, as the application of cold or fatigue, may have interrupted the menstrual discharge by exciting fever in the system. In this case confine the patient to bed—supply her with cool drinks—open her bowels—and, if medicine must be given, pro forma, exhibit the saline draughts. Under this treatment the feverishness subsides, and with the restoration of health there will be a restoration of the uterine functions.

Luxurious living often induces amenorrhœa by deranging the balance between the wear and tear of the system, and the

supply of food, thus producing a plethoric and unhealthy state of the constitution. Here abstemiousness with increase of exercise is the remedy. And should it be inefficient of itself, venesection (full bleedings rather than repeated small ones) with saline purgatives, must be resorted to.

"The patient should not lose less than from sixteen to twenty ounces of blood at once. Under ordinary circumstances it is very immaterial from what part of the body the blood is taken, provided the vessel is large and the orifice in the vein sufficiently so to allow the blood to escape rapidly; but if there should be any evidence of local congestion, it will be right to remove the blood from the neighbourhood of that part, as from the external jugular vein when there is pain in the head and giddiness." 43.

Lastly, should confinement, breathing an impure air, or poverty of living, have injured the general health, inducing debility and obstruction, and constituting chlorosis, then it will be necessary to invigorate the frame by every means in our power. The stomach must be strengthened, first by the lighter bitters and most digestible food, proceeding gradually to the use of tonics more powerful, as bark and steel. It is only when the constitutional weakness has been removed by such means, that we should have recourse to stimulants. Our author thinks it improbable that there are any medicines which exert a specific effect upon the uterus. In this we cannot agree with Mr. Clarke. There are very few organs in the body which are not peculiarly acted on by certain substances taken into the stomach: thus lytta stimulates the kidney, mercury the liver—and we may pretty securely affirm that the *secale cornutum* acts specifically on the uterus. However this may be, the volatile alkalis, spices, essential oils, and wines are useful general stimulants in the chlorotic state above mentioned; but the cold bath is a precarious remedy, especially when the stomach is unusually weak. The sabina, lytta, black hellebore, many of the resinous gums, electricity, and horse exercise, are stimulants which Mr. Clarke considers as exerting their influence "upon parts in the vicinity of the uterus." One drachm of the tinctura sabinæ composita may be given twice a day in some aromatic bitter draught, and the tincture may be increased to two drachms. Lytta, he thinks, irritates the urinary passages; and, through that medium, the uterine system, a knowledge of which circumstance is available in the case of obstructed menstruation. A blister, therefore, may be applied to the sacrum; or ten drops of the tincture may be taken internally at first, and increased to thirty, in infusion of cascarilla, or any convenient vehicle. As a substitute for lytta, a drachm of the tincture of black hellebore may

be taken. Thus, galbanum and aloes possess the power (especially aloes) of stimulating the rectum, and unless given so as to produce this effect, they are of little service in amenorrhœa. They are preferable to the oily or saline purgatives. When excessive irritation about the anus exists, the infusum lini may be injected (℥j.) once or twice a day, the other medicines intermitted for a few days.

In cases of dyspepsia, *unaccompanied by organic disease of the viscera*, gestation, particularly riding, is useful; "not so when organic changes are suspected to exist; as these have inflammation for their basis, it is evident that whatever excites action in such parts, will augment the mischief." We think this observation requires some modification. We believe that in chronic inflammation of the serous membranes and parenchymatous structure of organs, the succussions of horse, or even carriage exercise, are injurious. But in chronic inflammations of the *mucous* membranes, as of the lungs and bowels, horse and carriage exercise is peculiarly beneficial—a remark as old as Celsus, and confirmed by modern experience. "Gestatio *longis* et jam inclinatis morbis aptissima est, &c."—*Cels.* Dr. Currie, of Liverpool, when threatened with phthisis, found that horse exercise invariably equallized the balance of the circulation, and rendered the pulse slower. Hence in those cases of irritability of the heart, accompanied by palpitation or other irregular action, gestation on horseback, or in a carriage, is peculiarly advantageous. With these exceptions and limitations, we agree in the general correctness of our author's precept.

Mr. Clarke makes the same objections, and properly, to tonics and stimulating purgatives, when actual organic disease of the uterus, or indeed any viscus, exists.

"Under a treatment of a mild character, the occasional application of a few leeches, the administration of a little manna, oil, or magnesia, and small doses of hemlock, and under a diet at once soft and nutritious, but by no means stimulating, the author has known several instances of patients living many years, even when emaciation had taken place to a great degree; when, after death, disease (the result of slow inflammatory action,) was discovered, and that to a considerable extent, in the pylorus, the small intestines, and the liver." P. 49.

The remaining emmenagogue is electricity, the powers of which are very considerable in exciting the uterus to vigorous action. By means of it, says Dr. Clarke, "a great number of cases of amenorrhœa have been cured, when no other means have been successful." Like many other emmenagogue remedies, however, it can never be useful till the

powers of the system have been restored, and until the general health has been established.*

But to return from this digression to the subject of inflammation of the cervix uteri. Our author observes, that these cases often occur in habits where there is much inequality in the distribution of the blood, and consequently debility—resembling those cases where the glands of the neck, axilla, groins, or mesentery are in a state of chronic inflammation. These cases, we know, do not admit of antiphlogistic treatment. The cervix uteri is clearly a glandular structure, and Mr. C. thinks that it will be particularly liable to take on disease in habits which are prone to other glandular complaints. In phlogosis of the cervix uteri, therefore, in such habits, we must endeavour to equallize the balance of the circulation—"an object frequently attainable by the exhibition of tonics, among which the Peruvian bark and some preparations of iron, are the most serviceable." The decoct. cinchonæ, and tinct. muriat. ferri are the preparations recommended. Our author confesses, and with reason, that when the balance of the circulation inclines to any particular organ, as the head, the chest, the uterus, &c. it is no easy matter to conquer the disposition. It is no wonder that it should be difficult, because the disorder lies in the vessels of the organ itself, and not in the general circulation, for the heart can have no power of unequally distributing the blood. All irregular determinations depend upon the part where the congestion or plethora takes place.

In conclusion, our author thinks it a great point gained, if we can ascertain the true nature of this disease, of which the milky discharge is symptomatic, for thereby the practitioner is led to direct such measures as may tend to remove its cause, instead of those astringents too often employed on such occasions. It should be recollected that the cervix uteri is the seat of the disease—that this is the most sensible part of the uterus—that it is the part which carcinoma attacks—and that it is highly probable that slow inflammation there may lay the foundation for incipient carcinoma or other organic change. On all these accounts we cannot be too careful to remove so important a morbid process as chronic inflammation.

II. *Chap.* II. *Watery Discharge.* A discharge resembling clear water, containing very little or no glutinous matter.

* For a paper on the effect of electricity in amenorrhœa by Dr. Austin; see the third volume of "Essays Physical and Literary." Ed. 1760.

This results from cauliflower excrescence of the os uteri, hydatids of the uterus, or oozing excrescence of the labia. We shall notice them in their order.

Cauliflower Excrescence. Mr. Clarke prefaces the consideration of this subject by some remarks on the great tendency to disease in the organ which forms man's first nidus. Its outer or serous membrane is liable to peritoneal diseases —its muscular structure to irregular actions and tumours— its inner or secreting surface "is more liable to attacks of inflammation than any mucous membrane in the body"—its cervix or glandular structure to the diseases of glands in other parts—whilst the termination forms part in the vagina, at the os uteri, where it is covered by the inner membrane of the vaginal canal, is disposed to on different forms of disease, one of which forms is which stands at the head of this chapter.

"A more appropriate name could not have been given to this disease, than 'the cauliflower-excrescence.' There is a striking resemblance between itself and a portion of the upper surface of a cauliflower, or a head of brocoli. The surface is granulated, and it consists of a great number of projections, which may be picked off from the surface, as the granules may be detached from the vegetable. The firmness of the tumour agrees also with that of the plant—here the granules will be large and irregular, there small and equal." P. 59.

From a very fine membrane spread over the surface of this tumour is poured out the aqueous secretion. As the tumour occupies the upper part of the vagina, it is concealed from view; but in some cases where it attained a considerable size, our author saw it, and it had a bright flesh colour. It pours out arterial-looking blood very plentifully, if injured during examination, and sometimes spontaneously, in plethoric habits. This excrescence has little or no sensibility—can never be traced into the cavity of the uterus—is sometimes rapid in its growth, but much influenced by the contractile power of the vagina, being more rapidly developed in married women who have borne children, than in single women. Our author has not been able to trace any cause of the disease, nor any predisposition connected with age or other circumstance, excepting he never met with it in women under twenty years of age.

"Perhaps some small arteries near the os uteri may undergo that morbid dilitation of their coats which is analogous to aneurism in larger trunks, and thus the disease may be produced. Something similar to this takes place in the arterial, or blood-red nævus, but

here the surface, being covered by cutis and cuticle, no moisture of the part is met with; but if the surface of such a nævus should be injured, arterial blood escapes." 63.

No preparation of the cauliflower excrescence is preserved in any museum to which our author has had access, and he thinks the reason is, that the tumour almost wholly disappears after death, on account of its great vascularity. This was the case in two or three instances that fell within Mr. Clarke's own observation, where the tumour was perfectly distinct during life, but where, on dissection, nothing but a soft, whitish, flaccid substance, hung down from the os uteri resembling the fœtal portion of the placenta of a calf after maceration in water. We shall here abbreviate an interesting case related by Mr. Clarke, and where the practical indications were very puzzling.

Margaret Pole found herself pregnant of her ninth child in the beginning of 1810, and had a profuse watery discharge from the vagina, during the whole term of utero-gestation, sometimes tinged with blood, on any trifling exertion. In July the attendant practitioner found her in labour, and, on examination, felt a large tumour resembling placenta in the vagina, with a considerable discharge of blood. Mr. Clarke was then called in. In addition to the hæmorrhage there was constant vomiting, and consequently great exhaustion. The pulse was feeble and frequent, occasionally lost till the action of vomiting roused the circulation.* Mr. Clarke, on examination, found the vagina nearly filled with a substance resembling placenta; but on tracing it upwards he ascertained that, instead of coming down through the os uteri, as in placental presentations, it actually constituted a portion of the os uteri, so that there was scarcely any part of the circumference of this opening to which the tumour was not attached. As the os uteri was very little dilated, it was agreed that light nourishment and the usual remedies for checking uterine hæmorrhage should be exhibited. In a few

* We have had several opportunities of observing the great difference in effect between nausea and vomiting. If a vein happen to be open, no blood will be got during nausea; but as soon as actual vomiting occurs, the blood will spring forth with astonishing force, and completely resemble arterial blood in brightness of colour. From this we see that the action of vomiting, by driving the blood to the surface of the body, (for we observe the whole of the cutaneous vessels gorged during vomiting) frequently relieves internal congestion, or even hæmorrhage, as we have had some opportunities of witnessing. This may explain the reason why emetics have been recommended by practitioners in hæmoptysis and other internal bleedings, and perhaps may show that there is less danger from vomiting even in apoplexy, than is generally imagined. *Rev.*

hours the os uteri opened more, the uterus began to act, and a profuse discharge of watery fluid, tinged with blood, came forth.

"Under this lamentable combination of circumstances, the existence of a formidable and fatal disease, and the presence of labour, the great question was, how the patient should be treated. The head was too low in the pelvis to admit of the child being turned; to open the head would have been to destroy the child, supposing it to be still alive, to afford no advantage to the woman; to perform the Cesarean operation, would have caused, in the deplorably weak state of the mother, her immediate death, and that when it was doubtful whether the child was alive or not." 69.

The tumour being evidently of the cauliflower species, our author naturally concluded that it would become diminished in bulk by the pressure of the child's head. It was therefore determined to wait, and to watch the progress of the labour, apprising the friends of the perilous situation of the patient. The labour terminated naturally, but the woman sunk on the third day after delivery.

"The body was examined; and upon cutting open the vagina, the tumour had wholly disappeared, there remaining in its stead loose irregularly-shaped flocculent portions of matter, which arose from every part of the circle of the os uteri. There was nothing else found remarkable; and the uterus was as much contracted as it is usually found to be about three days after delivery." P. 70.

As the tumour under consideration is liable to be mistaken for placenta, it may be remarked, en passant, that a carcinomatous thickening of the os uteri bears no resemblance to the cauliflower excrescence, its size remains unaltered by pressure, and undiminished by death. The cauliflower excrescence and placenta, in fact, differ only (Mr. Clarke says) in name—the structure is the same.

Symptomatology. A perception of moisture first, and then gradually an inconvenient discharge, for which perhaps more abundant lavation with cold water is used, or the family receipt—isinglass and milk, internally. Still the discharge increases, but being unattended by pain or fœtor, the complaint is neglected, until a tinge of blood is perceived, or the cheek begins to change the rose for the lily, with a corresponding loss of strength. Then the alarm is taken. A discharge of blood almost always succeeds sexual intercourse —the digestion begins to be impaired—hysterical symptoms are produced, and all that host of inexplicable phenomena consequent on derangement of the chylopoetic viscera, increasing the patient's stock of bodily and mental misery.

Increase of debility is accompanied with decrease of absorption, and, of course, with depositions of fluid in different parts of the body, producing œdema of the feet at night, and puffiness of the face and eyelids in the morning. On this account, hydrothorax may destroy the patient long before she would have been exhausted by the disease itself. An alarming hæmorrhage sometimes induces a fatal syncope. "In many cases (says our author) the practitioner overlooks the disease, contenting himself with treating symptoms, without thinking of their cause." No great degree of emaciation, in general, attends the complaint. On the contrary, our author found, in several dissections, a layer of fat, of considerable thickness, covering the abdominal muscles. How different, (says Mr. Clarke) is this from the case of a patient destroyed by ulcerated carcinoma of the uterus, in which it is as easy to see the form and processes of the bones, as in a skeleton.

"Yet, as in this complaint a discharge is present, as now and then it is fœtid, as a tumour is found upon examination, and as the disease has always, sooner or later, a fatal tendency, it has been too frequently confounded with carcinoma. The prognostic, as to the *ultimate event*, it is true, must be the same; but the terms *sooner* or *later* admit of considerable latitude, and it is a great comfort to be enabled to lengthen life under such circumstances. It is not here, as in carcinoma, that whilst life is lengthened by art, distress and suffering is eked out with it. A patient labouring under the cauliflower excrescence may pass, nay, she may enjoy, several years of life, if she will be content to make some sacrifices." 87.

The discharge, and indeed the danger, being in proportion to the extent of surface of the tumour, it follows, that loss of tone in the vagina is an unfavourable sign, as the pressure of a contracted vagina checks the developement of the tumour. The danger is less also, when the tumour occupies only a small portion of the os uteri, than when the whole circumference of the opening is involved in the disease.

Therapeia. The enlargement of the tumour will be greatly retarded—nay, there is reason to believe that the size of the tumour will be *diminished* by judicious management—particularly by diminishing the action and fulness of the blood-vessels of the neighbouring parts. Mr. Clarke thinks that, by a steady perseverance in the proper measures, especially if taken early, "the farther progress of the disease may be put a stop to."

Local blood-letting from the region of the sacrum and hips, is a most valuable remedy. The quantity of blood to be taken away, must be regulated by the size and degree of resistance in the tumour, and by the quantity of watery dis-

charge (always a measure of the extent of disease) regard being paid to the strength of the patient.

"At the same time it must be recollected, that if, by the loss of eight or ten ounces of blood by cupping, the quantity of the watery discharge can be diminished from four ounces to two ounces daily, the patient will, at the end of a fortnight, possess more power than if she had lost four ounces of blood by cupping, and the quantity of the watery discharge had been diminished to three ounces daily." 91.

Local bleeding, however, when intemperately employed, may hasten the patient's dissolution. It should not be prescribed when much œdema of the feet is present, nor during the prevalence of much debility—in fact, it should not, at any time, be carried farther, than just to produce the intended effect, as there are many other auxiliary arts in reserve.

"If the patient should be a strong woman, and if the disease has not been of long duration, twelve or fourteen ounces of blood may be taken away; if she should possess less strength of constitution, it may be sufficient to order the removal of six or eight ounces only: and to repeat this once in three weeks or a month. The application of leeches is to be very little depended upon." 93.

Has Mr. Clarke employed leeches to the pudendum muliebre in these cases? We are inclined to believe that they will be found, in most uterine affections, more serviceable there applied, than either cupping or leeching elsewhere.

All general and local stimuli are of course to be avoided—the diet to be of the mildest kind, as puddings, white fish, and vegetables. Wine and sexual connexion to be entirely proscribed. The bowels should be so managed, that one easy motion be daily procured. All straining efforts in evacuating the rectum are highly injurious in uterine complaints, but especially in cauliflower excrescence. Fruit taken before breakfast, honey eaten instead of butter, a little manna eaten with a few blanched almonds, or a tea-spoonful of electuary of senna, will often obviate constipation. If these are not sufficient, the sulphate of magnesia in infusion of roses, will be found a mild laxative.

"The enlargement of the tumour may be greatly diminished, and the discharge consequently lessened, by the application of cold to the outside of the pelvis, and by the injection of cold fluids into the cavity of the vagina. Cold water may be applied to the external parts of generation, to the pubis, and to the loins, by means of a sponge; and this may be done, not once or twice only in the twenty-four hours, but several times; by keeping the parts in this way constantly chilled, the blood-vessels will be contracted, and the advantages resulting from such a mode of treatment will soon be made evident, in the diminution of the quantity of the discharge, and in *the im*provement of the constitutional health." 94.

The recumbent posture ought to be insisted upon. In injecting fluids, care should be taken that the syringe does not touch the excrescence, otherwise blood will flow. "A cylindrical syringe, the diameter of which is about three quarters of an inch, the extremity being rounded off, may be used for this purpose, and the patient should be cautioned not to introduce it farther than an inch, or an inch and a half."

In that aggravated form of the disease, where the tumour nearly protrudes, the patient should lie down upon the bed with her hips raised, and a small quantity of the astringent fluid should be poured in between the labia, with a common butter-boat. When the tumour has actually protruded, compresses dipped in an astringent fluid, may be applied, or a sponge wetted with it, may be lightly drawn over the surface. The astringent injections recommended, consist of sulphate of zinc and water, in various proportions, or alum, in a similar vehicle. Solutions of the mineral astringents in decoctions of astringent vegetables, constitute applications possessed of great power: such as cort. granat. contus. 3ss. aq. distillat. 3xiij. coque per sextam partem horæ et cola, dein adde liquori colato aluminis 3ij. Galls, or oak-bark, may be substituted for the pomegranate.

"The efficacy of the latter formulæ in a great measure depends upon the tannin. As this principle has the power of coagulating albumen, so as to form an insoluble precipitate, it becomes necessary to prepare the patient for a circumstance which may otherwise occasion great alarm in her mind—the appearance of thin, whitish, or ash-coloured flakes which will come away from time to time. These are frequently thought to be portions of the body, and the agitation of the patient's mind has been very considerable, until it has been quieted by some explanation." 101.

Where irritable vagina exists, a mixture of decoction of oak-bark and linseed tea, forms a less irritating lotion.

In many cases, where the constitution has suffered, the powers of nature require to be recruited, and we must employ some light tonic. The muriatic and sulphuric acids are appropriate medicines. Sulphate of zinc, in such doses as do not excite vomiting, and combined with an essential oil to reconcile the stomach to its use, is recommended as occasionally useful:—say as follows:—sulphate of zinc, gr. xv. extract of hop, 3j. oil of cinnamon, gt. iij. m. in pil. xv. one to be taken every night.

"The author is justified in repeating, that by a strict attention to and compliance with the rules above suggested, nearly every case of this disease may be made more tolerable; and, perhaps, such a change wrought in the size or the actions of the excrescence, in a few instances, as to remove all the symptoms." 104.

In some instances the resources of the medical art fail, and then the ligature holds out a prospect of relief, which has now and then been realized. True it is, that the fungus may, and probably will, be regenerated;—but a considerable time may elapse before a tumour of large size forms, and in the interim, by the removal of the secreting surface, the discharge will be restrained, and time will be afforded for the powers of the patient to recruit.

Hydatids of the Uterus. These are connected with the uterus and with each other by small filaments and by portions of substances partly bloody and partly gelatinous. A similar substance is attached to the internal part of the uterus, from which the footstalks of the hydatids grow. The number of these hydatids increasing, the cavity of the uterus enlarges, and when the organ has attained a large size, it seems to be offended by its contents, and then contracts upon them. The causes of this complaint are quite conjectural, or rather they are totally unknown.

When the pelvis can no longer contain the enlarged uterus, that viscus rises into the cavity of the abdomen, and may be felt as a circumscribed tumour through the parietes. The function of menstruation is usually interrupted.

"In the examination of a patient labouring under hydatids of the uterus, the body of this viscus will be found enlarged, and suddenly bulging out from the upper part of the cervix. All these symptoms attend other enlarged states of the uterus; but there remains to be mentioned one other symptom which serves to distin-

No means of curing or arresting the progress of this disease have hitherto been discovered. The patient is to be apprised of the nature of the complaint, and the event is to be patiently waited for, treating occasional symptoms as they arise. When the time arrives at which the uterus struggles to unload itself of its contents, then all the skill and energy of the practitioner will be necessary to control the hæmorrhage and sustain the powers of the constitution. Perfect quietude in the horizontal posture should be enjoined, and all stimulating food and drink denied. Cold applications are to be applied to the loins, abdomen, and external organs, and portions of ice, (their acute edges being rounded off by being held in the hand,) may be introduced into the vagina, or into the uterus.

"Let it not, however, be forgotten, that the great remedy for uterine hæmorrhage is uterine contraction, and every possible mode of exciting this is to be put in practice. The application of a bandage round the abdomen has sometimes the power of exciting this contraction; but if the hæmorrhage should continue profuse, and if any portion of the hydatids should remain in the uterus, an attempt should be made to remove these in order to produce complete contraction of the muscular fibres." P. 121.

Two or three fingers, or the whole hand, should be covered with pomatum, carefully introduced into the uterus, and carried up between the sides of the uterus and the hydatids, which are to be detached from the part to which they adhere by the most gentle means.

"The mass, being now included in the hand of the operator, is to be brought out of the uterus, the surgeon recollecting always, in the performance of this operation, that the degree to which the os uteri is dilatable without laceration, is in proportion to the size of the whole uterus, both in pregnancy, as well as in this disease. So that, supposing the uterus in this disease to be enlarged to the size of that viscus in the sixth or seventh month of pregnancy, the whole hand of the operator may be, if necessary, introduced through the cervix; whereas, in smaller dimensions of the uterus, if any attempt is made to introduce the whole hand through the cervix, however carefully it may be attempted, a laceration of it may ensue, and thus the patient may be involved in a new danger." P. 122.

The expulsion over, and hæmorrhage restrained, the constitution must be invigorated by suitable means—particularly by the cinchona and mineral acids.

Another variety of this consists in a single cyst which distends the uterus. Our author has never met with a case of this kind. We need not therefore do more than refer to the usual sources of information on this subject. In the 34th

and 35th sections of Burns's *fifth* edition, the reader will find information and references, on single and conglomerated hydatids.

Oozing Tumour of the Labium. In this, the discharge arises from the surface, or rather from the interstices of the tumour. The fluid is of a watery nature, and sometimes very abundant in quantity, being renewed almost immediately after the surface has been dried by a napkin. Blood never issues from the tumour, so that it has no analogy with cauliflower excrescence. The tumour is sometimes so large as to occupy the whole of the labia, extending even to the mons veneris. It seldom projects more than a line or two above the plane of the surrounding skin. The colour of the tumour varies little from that of the cuticle of the neighbouring parts.

"In the immediate neighbourhood of the tumour œdema is occasionally met with, but the tumour itself is not œdematous; soon after the surface of the tumour has been wiped quite dry, a watery fluid begins to ooze from it, and to form drops, which, having become large, at length run off, and keep the surrounding parts in a state of constant humidity; sometimes soreness and excoriation take place, as upon the upper lip, when the secretion from the nostrils is increased, but the tumour itself is seldom rendered more sensible." P. 129.

The secretion from this tumour corresponds, in appearance, with that from the cauliflower excrescence. The disease having begun, continues to enlarge, and insulated patches of it appear in the neighbouring parts, at length running into each other. Within the author's knowledge the complaint does not attack young women. The principal inconveniences of this disease are, an itching, sometimes preternatural sense of heat, and a watery discharge.

"When excoriations of the neighbouring parts are present, or an erysipelatous blush appears upon them, more advantage will be derived from the internal exhibition of the cinchona in substance, than from any other medicine; but no impression will be made upon the disease itself by this valuable remedy, and even the symptoms above mentioned will frequently recur, and call for the employment of the same remedies." 133.

A nutritious diet, and a moderate allowance of wine, should be prescribed. External applications may mitigate but never cure the complaint. Common starch-powder repeatedly sprinkled over the parts till it cakes upon them, is a very efficient remedy; but it will be necessary to keep the patient in the horizontal posture during its use—a position indeed which has a beneficial influence in itself.

"A mixture of starch-powder and cupri sulphas, very finely levigated, has been found serviceable; or a solution of cupri sulphas, or of argentum nitratum, may be used. A solution of gum arabic in decoctum quercûs may be tried. Cold water is also a valuable remedy, and there are no cases in which it will not afford much temporary comfort." P. 135.

Perhaps the most effectual applications are of a spirituous nature. Strong new port wine has afforded great relief; and when this has failed, brandy or arquebusade may be employed, or even alcohol. The complaint, upon the whole, is very rare.

Involuntary Discharge of Urine. Discharges of the urinary secretion, whether occasional or permanent, are troublesome, and often ulcerate the parts over which they pass. At the close of pregnancy, and in other enlargements of the uterus, the bladder can contain but small quantities of water, and this is often squeezed out in the act of coughing, laughing, or straining. For this case there is no remedy. Flat sponges sewed into the folds of a napkin should be constantly worn. If the inability depend on local or general debility, applications of cold water, bark, and the mineral acids, &c. may be used. If these fail, the lytta may be cautiously tried, or electricity. When all these are unsuccessful, mechanical means of compressing the meatus urinarius must be employed.

When a communication exists between the posterior part of the neck of the bladder and the anterior portion of the vagina, a most distressing case of involuntary discharge of urine will be the result.

"When the mischief has arisen from laceration or sloughing, it may be worth while to introduce into the vagina a large thin globular pessary, made either of wood or (which is better) of silver, perforated by a great number of holes, capable of containing a large piece of sponge. At the lower part of this pessary there should be a circular opening, through which sponges may be removed occasionally; and for this purpose a piece of string may be attached to the sponge, which, being emptied of the urine contained in it, may be again introduced into the cavity of the pessary without the removal of the vagina." P. 144.

The above extract has brought us to the *third* and last chapter of the work, which, however, occupies nearly half the volume. It embraces the important class of *purulent* discharges, and will furnish a short analytical article for our succeeding number.

Of what use would it be to offer an opinion of a work, of which we have presented so copious an analysis? Many

hundreds of our readers can appreciate the value of Mr. Clarke's practical precepts far better than we can. The wide experience, the known talents, and the unquestionable accuracy of Mr. Clarke, stamp a great value upon any work emanating from such a source; and we are happy in having the opportunity of selecting a part of our literary freight, this quarter, from a granary of such rich and precious materials. These materials are now sailing on the four winds, consigned to multitudes of unknown purchasers. We wish them a prosperous voyage, and bespeak for them a kindly reception.

Sive per syrtes iter æstuosas,
Sive facturus per inhospitalem
Caucasum, vel quæ loca fabulosus
Lambit Hydaspes.

VI.

On the Nature, Symptoms, and Treatment of the different Species of Amaurosis, or Gutta Serena; Illustrated by Cases. By JOHN STEVENSON, Esq. Surgeon-Oculist and Aurist to his Royal Highness the Duke of York, and His Royal Highness Prince Leopold of Saxe Cobourg: Member of the Royal College of Surgeons, &c. &c. One vol. 8vo. pp. 277. London, 1821.

[redacted]

The attention of Mr. Stevenson appears to have been drawn towards the subject of amaurosis, in 1804, by being called to an apoplectic patient, whose person was tall and thin, countenance pallid, and habits remarkably regular. Yet on dissection, besides extravasation of blood pressing on the tractus opticus, and causing blindness in the beginning of the paroxysm, the most decisive marks of vascular congestion were observed in the meninges of the brain. This case, our author remarks, served to show "that *pressure* is the immediate cause of amaurosis." This is, perhaps, too general a conclusion. That pressure on the optic nerve will cause blindness, cannot, we believe, be doubted; but, that amaurosis is *always* caused by pressure, we can scarcely admit, nor do we suppose that Mr. Stevenson means to draw such a conclusion.

Besides an attempt to elucidate the subject of amaurosis, Mr. Stevenson hopes to prove, by an appeal to facts, as well as reason and analogy, that the disease under consideration admits, in various instances, "*when unaccompanied with morbid changes of structure in any part of the eyeball,*" of successful modes of treatment. This exception narrows the hope of cure, however, very considerably.

The work consists of four chapters—namely, on the definition and symptoms, the prognosis, exciting causes, and treatment. To these are added, an Appendix of Cases.

Chap. 1. It is not very frequent that we find the etymology of a disease convey a just notion of its nature. Thus, the term amaurosis signifies merely dimness or obscurity of sight—and the term gutta serena was adopted, because the disease was supposed to arise from a drop of lymph, the pupil retaining its natural pellucidity. Mr. Stevenson's definition is—"that disease of the *eye* which consists in a diminution or total loss of sight, without any other visible imperfection in the organ, than a dilated and immoveable state of the pupil."* This definition, however, Mr. S. acknowledges, will not meet the varied symptoms of each particular case—an imperfection not confined to Mr Stevenson's definition alone. Thus, Richter asserts, that a degree of *squinting* is the only symptom inseparable from gutta serena. Our author

* Richter asserts, that nothing positive can be drawn from the mobility or immobility of the iris, as sometimes the one, sometimes the other is the case. It is but right, however, to observe, that Mr. Stevenson confines amaurosis to an affection of the optic nerve, and its expansion, solely. Whereas, he thinks, that the term in authors has been extended, in some instances, to affections of the choroid, and even sclerotic coats, and of the internal parts of the eyeball, and even of the brain.

allows that this symptom is generally present in patients with one eye amaurotic; but, in some of the worst species of the disease, in which both eyes are equally dark, the loss of control over the muscles allows them to act irregularly, occasioning that singular want of expression, vacant unmeaning stare, or rolling motion, as if the eyes were in fruitless search after the lost sight.

"But thou
"Revisit'st not these eyes that *roll in vain*,
"To find thy piercing ray."—*Paradise Lost.*

Bearing in mind, however, that strabismus is frequently owing to defective action of one of the muscles of the eye—to spmpathy with disordered states of the primæ viæ—to morbid habit, &c. still, when it coexists with impaired or lost sight, and independent of any of the causes above mentioned, "it may be regarded as one of the least fallacious of the pathognomonic symptoms of amaurosis." It is a useful criterion in assisting our decision, where there is no other visible mark, and where the patient may have an interest in deceiving us.

At page 7, Mr. Stevenson considers dilatation and immobility of pupil, as furnishing only presumptive evidence of amaurosis; but, apart from collateral evidence, not to be admitted as undeniable proof of the presence of the disease. Our author has seen complete amaurosis, where the pupil continued to perform its function correctly. Amaurosis again, is not unfrequently accompanied with a fixed and contracted pupil—a species of disorder, Mr. S. thinks, most commonly the consequence of a violent internal ophthalmia, and usually

in the mind of the experienced observer—especially if accompanied by defective vision. Sometimes, Mr. S. observes, the colour of the pupil inclines to a sea-green tint—at others, there is a deep-seated, diffused turbidity, or muddy aspect of the pupil, which has caused it to be mistaken for cataract—an error that may be avoided by attention to the state of the pupil, (the mobility of which is not influenced by incipient cataract,) and to the relative situation of the opacity, as compared with the more forward position of the crystalline.

One of the earliest symptoms of cataract is, the perception of a *settled* mist before the eyes, at which period, dioptric glasses afford considerable relief—whilst in amaurosis they are generally useless.

"Another diagnostic symptom, strongly and very properly insisted on by writers on the subject, applies to the difference which the flame of a candle exhibits to persons respectively labouring under incipient Cataract, or Amaurosis. To the former it appears as if it were involved in a generally-diffused thin mist, or white clouds; but to the latter a halo, or the colours of the rainbow seem to encircle, or emanate from the mist. Again, the individual who is affected with the imperfect Amaurosis, usually experiences an occasional increase or diminution of his visual faculties, under different states of the circulation, as influenced by a full and stimulant meal, by which some find their sight improved, others greatly deteriorated. Enlivening or distressing mental emotions, and other physical causes which have a tendency to excite or depress the energy of the nervous system, have a correspondent effect in affording a temporary benefit, or in causing a diminution of vision, which do not occur in cases of incipient Cataract." 29.

Our author thinks that the form attended with a deep-seated muddy appearance of the eye, is caused by an alteration in the texture of the hyaloid membranous septa of the vitreous humour, constituting the disease called glaucoma. But one of the worst—indeed, altogether incurable species of gutta serena, is that which is marked by an opaque, dull whitish appearance at the fundus of the concave surface of the eyeball, answering to the situation of the retina, in a morbid alteration of which it, indeed, consists. When this disease succeeds to deep-seated pain, it is probably the result of inflammation of the retina, which, like other transparent textures, becomes opaque from inflammatory action, occasioned either by an effusion of lymph upon the interior of the choroid, or by an actual change of its proper structure.

"In these instances, the whole of the back part of its internal surface undergoes a similar change, the cloudiness appearing somewhat concave, the pupil more or less expanded, the iris with little, or not any motion, the pupillary border irregular, and the vision nearly, or altogether extinguished." 82.

Though sometimes produced by *acute* internal ophthalmia, this affection of the retina more frequently proceeds from insidious chronic disease. The following symptomatology we cannot abridge, and therefore we quote it.

"The symptoms accompanying this form of the disease are a varicose, or overloaded state of the superficial vessels of the eye, with a sense of tension and occasional uneasiness, rather than violent lancinating pains, indicating a congestion of the deep-seated vessels. The sclerotica, at the same time, frequently becomes thinner and semi-transparent, and admits of the reflection of the vascular texture of the subjacent choroid, which occasions a generally diffused livid, or purplish tint; or yielding, in certain points of its circumference, one or more staphylomatous protrusions are formed. The humours, losing their natural limpidity, assume a yellowish or muddy appearance, and are so greatly increased in bulk, as to press through the pupil, causing it to become widely dilated and immoveable, the thin irregular border of which appears to stretch round, and to embrace the bulging lens." 33.

It is hardly necessary to add, that vision is wholly annihilated; though the patient is sometimes annoyed by the sensation of flashes of light—a proof that the sentient texture of the eye is involved in the general disorganization.

But instead of extensive changes in the tunics or humours of the eye, the whole sometimes appear sound, except on looking, by the aid of a good light, into the interior of the eyeball, when an opaque white spot, or projecting chalk-like or pearly substance is visible at some part of the concave face of the retina, which is frequently covered with a network of coloured vessels, derived from the arteria centralis retinæ. This disease has been termed *cancer of the eye*, and medullary fungus. It is not preceded by, nor, in its early stage, accompanied with, pain or any of the usual phenomena of inflammation. At the commencement of this dreadful disease, and before the fungus has begun its luxuriant growth, it appears in a detached molecula, at the fundus of the eye, resembling very much the soft medullary substance of the brain. In the progress of the malady all the structures of the eye become involved in an undistinguishable disorganized fungous mass. The constitutional derangements resulting from such a dreadful local irritation, may be easily imagined, and are well portrayed in the 36th page of the work before us.

"There is still another form of Amaurosis to be noticed, in which the bottom of the eye exhibits, in a strong light, a silvery or yellowish spot situated near the axis of vision. This appearance has been attributed to a circumscribed opacity of the retina, answering to the porus opticus. Others have supposed it to be the macula lutea of

Soemmering. It is however with more propriety ascribable to a diminished secretion of the black pigment, a defect which is sometimes experienced by persons advanced in life, or by those who have suffered under chronic wasting diseases, or choroideal inflammation. The eye, in this species of Amaurosis, ceasing to resemble, by its dark concavity, a camera obscura, like that of the Albino, is greatly distressed by strong light, and the partial illumination of objects, by exposure to which the sight is very much confused and temporarily impaired." P. 41.

The sight of persons labouring under amaurosis is very variously affected—some seeing only a part of the object before them, others having double or distorted vision, &c. To attempt to describe the various spectral illusions resulting from disordered states of the retina would be useless and unprofitable.

As the fixed muscæ are most commonly organic—so the volitantes acknowledge a functional origin, Mr. S. thinks—not unfrequently arising from sympathy of the retina with a deranged state of the chylopoietic viscera, and disappearing, of course, when the function of these organs is restored. The inability to adjust the focal power of the eye to *near* objects, without a sense of fatigue and weariness in the organ, so common with people as they advance in life, Mr. S. does not impute to a supposed weakness of the recti-muscles—nor to a preternatural rigidity of them—nor to any change in the form of the cornea, or defective secretion of aqueous humour, but to "an actual diminution of nervous influence in the sentient texture of the eye itself." This doctrine, our author thinks, derives strong support from the fact that—"in such cases the lively movement of the iris, and the ability steadily to maintain its healthy action, is proportioned to the strength of the adjusting power of the eye."

Our author has known instances of amaurosis occurring to several children in the same family—thus evincing an hereditary tendency. The disease is most apt to occur in eyes of a blue and black colour, and where vision has been habitually weak and irritable. When one eye is amaurotic, the other is in danger.

Amaurosis sometimes makes its attack very suddenly. Mr. S. has met with several instances of patients going to bed apparently well, and awaking with more or less complete loss of vision in one or both eyes, the pupils being, at the same time, proportionably dilated, and susceptible of the impression of light. These cases were *functional*, and terminated favourably. It more generally happens that Amaurosis advances in a gradual and insidious manner, with such fluctuations in progress, as sometimes to inspire hope, and at

others to induce despondency. Functional disease, if neglected, or too often repeated, may end in organic affection.

"Under ordinary circumstances," (our author observes,) "the patient becomes sensible of a somewhat weakened sight, or rather of an interrupted state of vision, manifested by certain parts of small objects, as for example, the letters or lines of a book, being at one time more distinctly visible than at another, the sight of which he alternately loses or regains by shutting or rubbing his eyes, or by moving his head in different directions. This symptom, which, when it occurs, is the earliest intimation of the commencement of the disease, is to be regarded as a proof of the impaired sensibility of the optic nerve, and may perhaps be explained by supposing, that certain points of the retinal expansion, in consequence of the general diminution of its energy, speedily lose their perceptive faculty. Hence it becomes requisite, for the continuance of the function of the organ, that new surfaces should be successively presented, which may not yet have been exhausted by the impression of external objects. Or, the stimulus of attentively observing a small object, inviting a further afflux of blood to certain parts of the vascular texture of the retina, already possibly in a preternaturally turgid condition, may induce an additional accumulation of fluids, a consequent pressure upon, and a corresponding torpor in, a defined portion of its medullary lamina." 65.

On other occasions the patient has a perception as if a spider's web or thin gauze, were interposed between eye and object—or he is annoyed by various imaginary appearances, as motes, threads, or other fantastic figures floating before him. The eye, at this period of the disease, begins to lose somewhat of its natural brilliancy, the iris, in most instances, becoming more and more dilated, sluggish, and less sensible to light.

"Should one eye only be affected, its iris will still act in accordance with that of the sound organ, provided both be allowed to remain open at the same time; but if the latter be closed, the pupil of the really diseased eye will be found to have lost its power of motion, on the admission of the usual degrees of light." 68.

A young practitioner, Mr. S. observes, may avail himself of this fact, in order to avoid the error of incautiously pronouncing both eyes to be equally perfect in sight. In the incipient stage of the imperfect amaurosis (contrary to what is the case in cataract) the patient generally sees best in a strong reflected light—at which period, convex glasses are sometimes found to assist his sight. But when the malady is fully formed, he derives no assistance from this kind of spectacles. In some cases, however, strong light occasions distress to the organ of vision. Here there is reason to sus-

pect that inflammation has pre-existed, and left the eye in a preternaturally susceptible state—or that morbid action is going on in the retina itself, or some of the adjoining textures.

Chap. II. *Prognosis.* This, as in most other diseases, must be founded on the peculiar nature of the existing causes. If the disease depend on organic lesion of the seat of vision, it may, of course, be considered incurable.

"When the sight is wholly extinguished, and the iris is immoveably dilated, or preternaturally contracted, the effect of local or cerebral disorganization, symptoms which have been preceded by, or are accompanied with violent pain of the cranium, the eye, or the forehead, the consequence of apoplexy, syphilis, blows upon the head or eyeball, or of obstinate internal ophthalmia; these, and other causes of a similar tendency, produce the modifications of Amaurosis, or varied forms of the same disease, which may justly be pronounced, in almost every instance, absolutely incurable." 73.

On the other hand, those cases of imperfect amaurosis, which have not been ushered in by intense and long-continued cephalalgia, ophthalmodynia, or sense of great constriction of the eyeball, and in which there are still some remains of sight, either laterally or in the axis of vision, with preservation of natural black colour in the pupil, will frequently admit of relief. Those cases of a periodical character also, provided they have not been allowed to run on long uncontrolled, may be regarded as of a favourable nature, since they are almost always referable to sympathy of the eye with gastric, hepatic, or intestinal irritation—or else they are symptomatic of hysteria, chlorosis, gout, &c. in which cases, the removal of the primary disease restores the suspended power of vision.

Chap. III. *Exciting Causes.* We shall pass over some introductory observations, physiological and pathological. Our readers are aware that, in the first number of this series, we endeavoured to show that *pressure* on the encephalic mass, whether the blood was in or out of its proper vessels, was the great and almost universal cause of apoplexy. Mr. Stevenson has applied this doctrine to the etiology of amaurosis, and endeavours to prove, as far as proof can be obtained in these cases, that *pressure* on some portion of the optic nerve, whether thalamus, tractus, or retinal expansion, is the efficient cause of amaurosis in the great majority of cases. At the same time he does not carry the principle too far, nor deny that other causes, and even diametrically opposite ones to *pressure*, should occasionally produce the dis-

ease. He is ready to admit that, in a few cases, it results from inanition, after great loss of blood, or from mere debility, after protracted and exhausting diseases. To these may be added the operation of narcotics and sympathy with other organs.

"With these reservations," says Mr. S. "the doctrine is as universally applicable as it is generally true."

Can it be doubted, he adds, that *pressure* acting upon the visual nerve, in any part of its course or expansion, is not invariably productive of greater or less derangement, or the total annihilation of its function, according to the degree of force with which that pressure has been applied? Here our author refers to the sepulchretum and other sources, for examples of pressure from tumours, &c. It must be confessed, however, that in some who have died amaurotic, no perceptible change could be discovered in the structure of the optic apparatus after death. The late Mr. Ware supposed that, in these cases, there was pressure on the nerve from dilatation of the anterior portion of the circulus arteriosus. But this was only conjecture. Mr. Stevenson is more inclined to attribute the disease to vascular congestion of the capillary vessels of the retina itself, the immediate seat of vision.

"It is, I may repeat, exceedingly probable from analogy, supported by well-ascertained facts, that the greater part of the various and anomalous affections of the retina, characterized by impaired or depraved sight, without organic lesion, are the result of particular

light-coloured and highly-illumined manipulations. Persons addicted to read, write, or perform much fine needlework by the aid of candles, and what is much worse, by the brilliant and artificial light of lamps, rarely fail, if their organ of vision be constitutionally feeble, to discover, sooner or later, a greater or less decay of sight." P. 121.

Our author in a former treatise, has endeavoured to show that the defective vision, in the above cases, does not depend on primary local debility in the optic nerve or expansion, but that it acknowledges, as its proximate cause, an inflammatory, or at least a preternaturally turgid condition of the blood-vessels of the retina and choroid coat.

Although light be the natural stimulus of the eye, yet, like all other stimulants, if inordinately applied, it will occasion local plethora, and morbid sensibility. The relief, in such cases, of the more urgent symptoms, by local and general depletion, is a strong confirmation of the doctrine.

While a moderate degree of congestion in the ophthalmic vessels determines what our author denominates weakness of sight, a higher degree of vascular excitement announces the presence of *acute* retinal inflammation, characterized by greater intolerantia lucis, more distressing and deep-seated pain, referred to the fundus of the orbit, and darting frequently to the temples, occiput, and through different parts of the head; contracted pupils, ocular spectra, in the shape of drops of blood; sparks of fire, or meteoric flashes; disproportionate external redness; constitutional derangement, as quick hard pulse, and obstinate watchfulness.

If these symptoms be not speedily combated, the pain and sensibility to light diminish, the pupil begins to lose its preternatural contraction, and the sight becomes more and more imperfect, until, in a short time, the iris is fully and immoveably dilated, unless fixed by adhesive inflammation, the sense of sight being generally irreparably destroyed. The following is a summary of our author's pathology of amaurosis.

"The above observations warrant, I conceive, the following corollaries, viz. that a certain degree of fulness of the blood-vessels of the retina is essential to the healthful state of the organ: that an increased plethora, or inflammatory condition of them deranges their function, and produces the disease termed "Weakness of Sight;" that more active symptoms of the same nature, constitute acute inflammation of the retina, or deep-seated ophthalmia. In the chronic state of the disease, the increased bulk produced by the distention of the vessels of the lamina of the retina, occasions pressure upon its medullary texture, and deprives it of its natural sensibility, or in other words, induces paralysis; amaurosis, as already remarked,

being a common result of internal inflammation of the eye. Between these different degrees of a plethoric, and truly inflammatory condition of the immediate seat of vision, there may be an almost infinite number of shades and gradations, occasioning that variety, and anomalous character in the symptoms, which are observable in the different affections of the retina."* 133.

Another obscure but important class of exciting causes of amaurosis must be sought in irritations or derangements of the abdominal viscera. In our present state of knowledge we cannot account for the various sympathies of distant organs, and therefore we shall not spend time on the *quomodo*, while in search of the *quo*. In this class, Mr. Stevenson thinks we cannot regard the amaurotic symptoms thus produced, as indications of an organic or structural, but simply of a functional derangement or torpor, constituting the symptomatic species, tractable, in general, if taken early. It is almost unnecessary to say that, in these cases, the origin, or visceral source of the disease, must be sought, otherwise little impression will be made by remedies directed to the *apparent* seat of the morbid affection.

Mr. Stevenson next adverts to certain narcotic and poisonous substances which, when applied locally to the eye, or sympathetically through the medium of the stomach, are supposed to produce gutta serena. He thinks their operation, especially when taken into the stomach, is to produce an additional afflux of blood to the brain, and thus to oppress and

and sometimes wholly cured, by topical depletion, rubefacients, and other modes of counter-irritation.

Our author concludes the subject of etiology, by briefly considering that species of amaurosis, supposed to arise from causes which operate indirectly upon the nerve of vision, by inducing a sudden and very considerable reduction of constitutional vigour, or whose debilitating influence is confined to the eye itself. We all know that extremes approximate, and that inanition will produce effects very similar to congestion. It is well known, also, that derangements of balance in the circulation, are more liable to take place in the weakly, than in the vigorous constitution; for nothing is more common, than to see a great local congestion, or even inflammation, combined with general debility. It is a curious fact that; in numerous experiments on animals bled to death, there was always found local congestion, inflammation, or effusion, under the membranes of the brain. Amaurosis, however, from want of sufficient fulness in the blood-vessels, is exceedingly rare, when compared with those cases, which are the offspring of a plethoric condition of the vessels of the eye. The continental writers consider gutta serena as frequently produced by the translation of gout, rheumatism, syphilis, porrigo, scabies, &c. upon the nerve of vision, and we have little doubt of the fact, however sceptical most of our brethren in this country may be on the subject. At the same time, we do not consider the case as a mere translation of *matter*, but a vicarious morbid *action*, sometimes set up in the organ of sight, in consequence of the above-mentioned diseases having been injudiciously disturbed in their course.

Chap. IV. *Treatment.* Mr. Stevenson observes, that writers have, for the most part, contented themselves with describing amaurosis as a morbid affection of organ, consisting in a weakness, debility, loss of tone, or exhaustion of the optic nerve or retina. And this naturally led to an indiscriminate employment of powerful, general, and topical stimulants, without regard to the species, exciting causes, or existing phenomena of the disease. Mr. Stevenson thinks that error has been committed in the treatment of amaurosis, in consequence, probably, of practitioners not being aware that, a congestion, or even inflamed state of the retina, is not indicated by the same train of symptoms, which bespeak a similar condition of the more external textures of the eye.—These states are often to be inferred *solely* from an alteration, or suspension of function in the organ.

We have found some difficulty in following our author through this division of the work, in consequence of his so

frequently lapsing backwards into the same train of pathological discussions, pursued in a preceding chapter, and here reiterated, though not exactly totidem verbis.

Beer suggests a division of amaurosis into two classes—one attended with diminished irritability of the whole eye, the patient seeking a strong and brilliant light—the other characterized by tenderness and irritability of the organ, the patient being averse to bright and vivid light.

"A more practical and useful division of the subject is, I conceive, into *sthenic*, or *acute*, and into *asthenic*, or *chronic* Amaurosis, the former being the product of high arterial action either in the retina itself, or in the adjoining parts of the eye, in habits constitutionally strong and vigorous; the latter, the offspring of local congestion, from a relaxed and debilitated state of the system at large, and of the part affected in particular." 189.

The efficacy of emetics in amaurotic cases, arising from derangement of the primæ viæ, but immediately dependent on local plethora, is discussed by our author, amidst some pathological speculations, for which we refer to the work. This efficacy he attributes, not so much to cleansing the stomach, as to restoring the balance of the circulation, and thus counteracting local congestion, or inflammation. Purgatives, since the days of Hippocrates, have been highly esteemed in ophthalmic inflammations, and, on the same principle, they must be beneficial, our author remarks, in amaurosis, dependent on vascular excitement, or oppression of the retina.—The following contains the text of Mr. Stevenson's therapeutics in this disease.

"From what has been advanced, the indications of cure must consist in relieving the retina from vascular excitement or oppression, the effect of local inflammation, or simple congestion, by general or topical depletion, proportioned to the urgency of symptoms and the character of the disease, and by other means calculated to derive from the part affected, by removing obstructions and equallizing the circulation, and finally, by restoring the tone of the vessels and the impaired energy of the nervous texture of the eye." 203.

In robust habits, and where the causes have been such as indicate the acute form of the disorder, both topical and general bleeding must be resorted to with promptitude and decision, in order to arrest the disorganizing process.

"And it should not be concealed, that a much larger quantity of blood must be abstracted in the primary retinal, or choroidæal inflammation, than in common cases of ophthalmia, in order to make such an impression on the morbid state of the deep-seated vessels, as to check the inflammatory action of the larger arterial branches, and enable the overcharged capillaries to recover their power of healthy contraction." 204.

resemble in every respect those which ramify on the inner surface of the pleura. It wants, however, the firmness of the natural cellular substance, being easily torn in our attempts to examine it, and its vessels still retain the large diameter indicative of their recent formation: and it requires some considerable time for them to attain the perfect character of the original tissues of the body." 153.

These organizations having taken place, the health remains unaffected, and the respiration, except in some particular cases, does not suffer from their presence.

In simple pleurisy, we find no sign whatever of inflammation of the pulmonary parenchyma, even in the vicinity of the most inflamed portions of pleura. We find the substance of the lungs, in such cases, more dense and less crepitous, owing to the compression of the effused fluids. If the extravasation has been very great, the lung becomes flattened, ceases to contain air, and consequently to crepitate; its vessels are compressed and contain little blood, and the bronchia, with the exception of the larger trunks, are evidently rendered smaller.*

Sometimes, however, we observe certain portions of the lungs possessing a redness like that of muscle; and a compact homogeneous texture, in which no trace of air-cell can be detected. This has been termed carnification or hepatization of the lungs. Our author considers it a product of inflammation.

Here M. Laennec notices a symptom of pleurisy accompanied by effusion—to wit, *enlargement* of the side of the chest, a dilatation noticed by all writers on empyema, since the days of Hippocrates, but which our author has ascertained to take place from effusion in recent pleurisy. He has often found it very distinct after two days illness. It is, of course, much more evident in lean, than in fat persons. On measuring the affected side with a piece of riband, we find it enlarged, but not so much so, as to appear to the eye. In proportion as the effusion becomes absorbed, the dilatation of the chest insensibly disappears; and then, as we shall presently see, the affected side sometimes becomes narrower than before the disease.

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* We again and again exhort our junior brethren to study these and all the other minutiæ of pathological anatomy, with the utmost care, were it for no other purpose than that of being able to discriminate between morbid and healthy structure, when opening bodies. Few days pass that we have not opportunities of seeing false conclusions drawn in post mortem examinations from non-acquaintance with minute morbid anatomy.—R.

Chronic Pleurisy. This does not differ materially, in its anatomical character, from the acute form. In the chronic disease, the pleura is commonly of a deeper red—the serous effusion more abundant, and almost always less limpid, being mixed with a great quantity of albuminous flocculi, sometimes rendering the liquid quite puriform by their abundance and minuteness. In such cases, these puriform fragments accumulate in the most depending parts of the thoracic cavity, and, by their consistence, form a link between the sero-purulent effusion and the false membranes. The extravasated fluids in chronic pleurisy, are rarely so free from smell as in the acute—sometimes they have a heavy odour, more disagreeable than that of healthy pus. This disease has rarely any natural tendency towards resolution. "In cases of extravasations which have lasted several months, we find no mark of any step towards the conversion of the false membranes into cellular substance." A cure, however, is sometimes effected in a manner that shall presently be shown.

"The effusion produced by chronic pleurisy tends, most commonly, to become daily more considerable. The affected side becomes manifestly larger. The intercostal spaces grow broader, and rise to a level with the ribs, and sometimes even higher. The lung of the affected side, compressed towards the mediastinum and spine, and retained in this position by the pseudo-membranous exudation which covers it completely, is sometimes reduced to a thickness of little more than half an inch, even in its middle, and, without a careful examination, might be considered as totally destroyed. In this state the pulmonary tissue is soft, pliant, and dense, like a piece of leather, without any crepitation, more pale than natural, occasionally grayish, and entirely without blood. Indeed the blood-vessels are often seen flattened and empty. The cellular texture is nevertheless still very distinct; and sometimes, though rarely, some points are found in the state of *carnification* above described. This state constitutes the *Empyema* of authors, at least of modern authors; for I apprehend no one now considers empyema as the product of a vomica which has burst into the cavity of the pleura. A softened tubercle may, indeed, discharge its contents in this manner, and may thus become the cause of a considerable effusion by exciting a chronic pleurisy, but in such a case the tuberculous matter must only be considered in the light of an extraneous body determining inflammation, and consequent effusion, by its mechanical or chemical qualities. It is also to this species of pleurisy that we must refer those histories of *lungs entirely destroyed by suppuration* which we find recorded in the older writers." 158.

Such is chronic pleurisy. It exhibits, in none of its stages, the intense fever, reaction, and acute pain, that characterize an active disease. It commonly attacks subjects of a worn-out constitution, more especially such as have suffered from a

tubercular affection of the lungs or other organ. This complication with other diseases, and want of prominence in its symptoms, general and local, cause it too often to be overlooked, or misunderstood. There is another variety of chronic pleurisy, namely, where the acute disease becomes chronic from any cause which prevents the absorption of the effused fluids, and the conversion of the false membranes into cellular substance. Hydrothorax is a result of this state, and will be considered farther on.

Before we proceed to the section on "contraction of the chest, consequent on certain pleurisies," we shall take some notice of the *diagnosis* of pleurisy, which Dr. Forbes has *translated* to another part of the volume.

Well-marked acute pleurisy is easily recognised in general. The stitch in the side, dyspnœa, fever, dry cough, or cough accompanied only by glairy and almost colourless sputa, are often sufficient for the diagnosis.

"But it is not uncommon to meet with pleurisies, even acute, in which many of these symptoms are wanting; whilst many chronic pleurisies are often so indistinctly characterized, and accompanied by so many functional anomalies, that it is frequently not till after several weeks, or even months, that the true nature of the disease comes to be suspected." 333.

Percussion points out the disease with more certainty.—Resonance of the chest fails, over that part where the effusion exists. This failure, it is true, may also arise from peripneumony; but the general symptoms, and particularly the expectoration, will tend to fix the distinction. The application of the stethoscope affords still more certain means of discrimination. The signs by which the cylinder effects this, are, 1st, the total absence or great diminution of the respiratory murmur, heard in a sound state—2dly, the appearance, disappearance, and return of the sound, to which our author has given the term *Hægophonism*.

"When, as it is often the case, the pleuritic effusion is very copious from its very commencement, the sound of respiration is then totally absent through the whole of the side affected, except in the space of three finger's breadth along the vertebral column. This complete disappearance of respiration after the existence of disease for a few hours, is quite pathognomonic of pleurisy with copious effusion." 334.

In peripneumony, the cessation of the respiratory murmur is gradual, and is perceived to be unequal in different parts of the chest, being often not lost in the upper part, till after some days or weeks; in pleurisy, on the contrary, the loss of the respiratory murmur is sudden, equable, uniform, and so

complete, that no effort of inspiration can render it perceptible.

These copious and sudden effusions occur chiefly in old persons, or in adults of weak and cachectic habits. The sudden cessation of the respiratory noise through the cylinder, must therefore be considered a bad prognostic, as we may be assured that, the conversion of the false membranes into cellular substance, and the absorption of the fluid will either not at all take place, or imperfectly, and, consequently, that the disease will soon pass into the chronic state.

"When the effusion begins to diminish, by absorption, this is first observable by the augmented intensity of the respiratory murmur along the side of the spine, where it had never quite disappeared. Shortly after, it is perceptible in the anterior superior part of the chest, and top of the shoulder, and in a few days it returns in the other parts of the chest. Wherever there are adhesions between the lungs and pleura, of any considerable extent, the respiration continues audible over them in a greater or less degree throughout the whole period of effusion; and the commencement of the absorption is perceived by the augmented intensity of sound in these places." P. 335.

Contraction of the Chest consequent on certain Pleurisies. There are some cases of pleurisy wherein the affected side never becomes sonorous, in the trial of percussion, although the disease has been cured, and the effused fluid absorbed. Cases of this kind, though not very rare, have not attracted much attention. The subjects of this morbid alteration are easily distinguishable by their external shape and gait: they

ticular hardness, and an incipient organization which render them incapable of being converted into cellular substance. When the effusion is absorbed, the lung long compressed by it, and further bound down by a strong false membrane, completely investing it, cannot dilate itself promptly enough to keep pace with the progress of the absorption; the ribs consequently contract, and the cavity of the chest is thus diminished. When the fluids are entirely absorbed, the costal and pulmonary exudations come into contact, and finally unite, so as to form only one substance, the consistence of which becomes daily firmer, till, in a few months, it acquires the character of a fibrous, or fibro-cartilaginous membrane.

These membranes have been commonly described, our author thinks, under the name of *thickenings* of the pleura—a mistake very liable to be made by those who trust to the mere appearance of these, without further examination. But on dissection we can always detach them from the pleura, which is found of its natural thickness.

This contraction of the chest coinciding with the absorption of the serous effusion, is frequently not perceptible till after several months of disease, or tedious convalescence. At length, however, the patient regains perfect and often permanent health. Two plates are given, representing back and front views of patients with this curious contraction. M. Laennec is deserving of great praise for his minute and curious pathological investigation of this interesting subject.

Hydrothorax. M. Laennec thinks that *idiopathic* hydrothorax is an extremely rare disease.* Many other disorders a ar often ranged under the head of hydrothorax, as diseases of the heart and great vessels, irregular consumptions, and even scirrhus of the stomach and liver. What has chiefly led to the idea of hydrothorax being a frequent disease, is the common mistake of taking a *sero-purulent effusion* for it—a part of these effusions being generally transparent.

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* "The great rarity of the true hydrothorax ought to make us cautious how we give this name to so many affections as we are accustomed to do; and the undoubted fact of a serous effusion being an almost uniform attendant on the inflammation of membranes, ought to make us slow to trust to mere diuretics and other similar remedies in cases wherein we have strong reason for suspecting dropsical effusion; especially in the chest. The now very generally allowed connexion between dropsy and inflammation, mentioned by our author in many parts of this treatise, is still much better understood in England than France. It is therefore hardly necessary to refer the English reader to the works of Blackall and Parry, and especially Crompton, for the practical and pathological illustration of this important doctrine." P. 429.

"Idiopathic hydrothorax commonly exists only on one side. Its anatomical characters are simply an accumulation of serum in the cavity of the pleura; this membrane being quite healthy in other respects; and the lung being compressed towards the mediastinum, flaccid, and destitute of air, as in cases of pleuritic effusion. When the effusion is very great, the affected side is evidently larger than the other. This disease may exist in a very great degree without any other symptom of dropsy in any other part of the body." 193.

The chief, almost the only symptom of this disease, is impeded respiration—its progress, and the state of the general symptoms, can alone distinguish it from chronic pleurisy.

*Symptomatic Hydrothorax** is as frequent as the idiopathic is rare. The symptomatic effusion may accompany almost every disease, acute or chronic, local or general, usually announcing their fatal termination. It is not, perhaps, more frequent in cases of ascites and anasarca than in other diseases. It is commonly met with in persons dead of acute fevers, diseases of the heart, or tubercles or cancer of different organs.

"Its symptoms, which are in every respect like those of the idiopathic disease, do not, in general, make their appearance but a few days, or even hours, before death. When the effusion takes place on both sides of the chest, it produces a very painful suffocation. Sometimes, however, we find a considerable effusion in both sides, in cases where there had been no very notable dyspnœa before death. Might not the effusion in such cases take place in the very moment of dissolution,—or even after death? We know that the

cles that form on the surface of the pleura are generally very numerous, varying in size from a millet to a hemp seed. They are often united by means of a soft semi-transparent false membrane. At an early period we can sometimes scrape off this false membrane, and with it the greater number of the tubercles, which are evidently rather developed in it than in the pleura itself. At a later period the false membrane disappears, or unites with the pleura—which then seems thicker, in which case the tubercles appear imbedded in its substance.

"We find also, occasionally, on the pleura, another variety of granulations which resemble some other cutaneous eruptions. This consists of small, white, opaque, flattened grains, placed very close together, and of a firm texture like that of fibrous membranes. This variety is also accompanied by thickening of the pleura. It appears to me to be the result of the imperfect organization of a false membrane, such as I have already described (page 147.) These two varieties of morbid growths are very rare on the pleura, but very frequent on the peritoneum. Bichat is the first who noticed them, though he does not seem to have known the real nature of them: they are always accompanied by hydrothroax." 179.

Our readers will recognise, in these passages, what our countryman, Dr. Baron, has since more fully developed under the title of "tuberculated accretions of the serous membranes."

*Pneumo-Thorax.** Occasionally we find aeriform fluids in the cavities of the pleura, which are sometimes without smell, but more commonly fetid, resembling sulphuretted hydrogen gas. These fluids are occasionally in such quantity as very forcibly to compress the lung, and distend the thoracic parietes. In this case the ribs are found more or less separated, and the diaphragm projecting into the cavity of the abdomen, forcing the viscera before it.

Although not exceedingly rare, this affection has been but little observed by medical men. In general we know it only by the casual observations of anatomists and surgeons, who have occasionally noticed the escape of air in opening the chest after death, or in performing the operation of em-

* "Dr. Duncan, Jun. informs me that he has often met with this affection in cases of empyema. Where he suspects it before opening the thorax, he examines the diaphragm from the abdomen.—'In one case lately,' he says, 'as I predicted, we found the diaphragm on one side convex upwards, and on the other convex downwards: on puncturing an intercostal space on *this* side, the air rushed *out* and the diaphragm rose into the chest.'" P. 429.

very pale around the hæmoptysical induration; sometimes, however, it is rose-coloured, or even red, as if tinged with fresh blood; but, even in this case, the circumscription of the indurated part is equally distinct.

"The indurated portion is of a very dark red, exactly like that of a clot of venous blood. When cut into, the surface of the incisions is granulated as in a hepatized lung; but in their other characters, these two kinds of pulmonic induration are entirely different. In the second degree of hepatization, along with the red colour of the inflamed plumonary tissue, we can perceive distinctly the dark pulmonary spots, the blood-vessels, and the fine cellular intersections, all of which together give to this morbid state the aspect of certain kinds of granite, as has been already observed. The same thing is observable in the third stage of peripneumony, and even when the infiltration of pus has converted the lungs into a yellowish mass. In the induration of hæmoptysis, on the contrary, the diseased part appears quite homogeneous, being altogether black, or of a very deep brown, and disclosing nothing of the natural texture of the part, except the bronchial tubes and the larger blood-vessels. The latter have even lost their natural colour, and are stained with blood." P. 62.

In scraping the incised surfaces of these parts, we detach a small portion of very dark half-congealed blood, but in a much less proportion than we can press out the bloody serum from a hepatized lung. Sometimes the centre of these indurated masses is soft, and filled with a clot of pure blood.

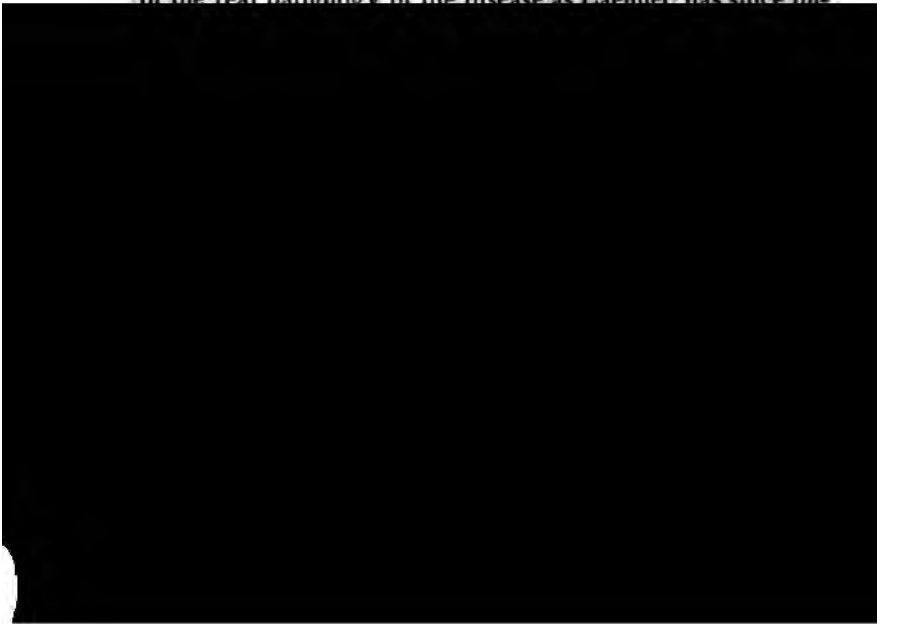
This morbid affection appears to our author to be evidently produced by an effusion of blood into the parenchyma of the lungs—in other words, into the air cells. From its exact resemblance to the effusion that takes place in the brain in apoplexy, M. Laennec has given it the term pulmonary apoplexy. The lungs and brain, however, are not the only organs in which a similar effusion may occur. It is seen to take place instantaneously in the subcutaneous cellular tissue between the intestinal and ocular tunics, among the muscular fibres of the heart, and under the cellular coverings of the pancreas and kidneys. "In a case of fatal apoplexy," says M. Laennec, "I have found large effusions of blood in the cellular membrane of every limb, of the trunk, and in that surrounding most of the abdominal viscera."

"The hæmorrhagic induration of the lungs is as easily distinguishable from the congestions that take place after death, as from the alterations produced by peripneumony. The sanguineous congestions of the dead body consist of an accumulation of blood intermixed with serum, often spumous, which flows plentifully on an incision of the part, and tinges the lungs of a livid or vinous colour. Being the mere consequence of gravitation, the engorgement is found most considerable in the most depending parts of the lungs, and

gradually lessens towards the superior parts. Where most engorged, the part still retains some crepitation, and the incised surfaces are never granulated, even when the congestion is so great as to destroy the spongy character of the lung. By washing, we can, in every case, remove all the blood, and restore the lung to that sort of flaccidity which it possesses when compressed by a pleuritic effusion. The engorgement of hæmoptysis, on the contrary, is accurately circumscribed, very dense, dark-red or brown, granulated, and almost dry when incised, and grows pale by washing, but without losing any part of its consistence." P. 64.

Whatever may be the severity of the case, resolution seems to take place with considerable facility, since we find a great many instances of cure after very severe hæmoptysis. The above is the condition of parts in all these severe cases; but when the symptoms are moderate, and the hæmorrhage slight, the only morbid alteration of structure is a reddening and thickening of the bronchial membrane, which, in these cases, seems to permit the transudation of the blood.

Therapeutical matters enter not into the composition of this valuable work; but we may just remark, en passant, that we have found practitioners in this country too timorous in respect to the exhibition of superacetate of lead and opium in hæmoptysis. We have happened to be much in the way of this disease, and we have found such decided benefit from the combination above mentioned, and that in large doses, that we beg to impress the circumstance on the memory of our younger brethren. Without having so accurate an idea of the real pathology of the disease as Laennec has since im-



VIII.

On the Nerves; giving an Account of some Experiments on their Structure and Functions, which lead to a new Arrangement of the System. By CHARLES BELL, Esq. (From the Philosophical Transactions.) Quarto, pp. 80. One Plate. London, 1821.

WITHOUT physiology—that is, without a perfect knowledge of the laws by which the *healthy* functions of our system are governed, we cannot expect to make much progress in pathology. Every person, therefore, who elucidates a known, or discovers a new law in the animal economy, contributes his mite to the advancement of the science of medicine—even if that law should not *appear* to bear on any point of pathology or practice at the time.* No man, in this country, works harder in unravelling those mysteries of the nervous system which puzzles our senses, than the present distinguished teacher in the venerable school of the Hunters.

Mr. Bell remarks, that when the physiologist sees two distinct nerves ramifying over the face—three nerves, from different sources, going to the tongue—four to the throat—and nerves in most perplexing intricacy to the neck; when he finds one nerve with numerous ganglia upon it, and another without them—when, in short, after a minute dissection of the nervous system, he finds a mesh, or network, spreading every where, it is not surprising that the seeming intricacy and confusion should make him, in despair, resign inquiry. Mr. Bell, however, by long dissection and study, has been able gradually to decipher some of the abstruse language of the nervous system, and hopes, sooner or later, to come to a comprehension of the whole.

The present inquiry is limited to the *nerves of respiration*, which our author thinks, form a system of great extent, comprehending all the nerves which serve to combine the muscles employed in the act of breathing and speaking. Tranquil breathing gives a very limited view of the respiratory muscles. But if a man be excited by exercise or passion, or by whatever accelerates the pulse, the respiratory action is extended and increased; and, instead of the almost imperceptible motion of the chest, as in common breathing,

* When the air-balloon was first discovered, some one flippantly asked Dr. Franklin what was the use of it? The Doctor answered, in the Socratic manner, by asking another question:—*What is the use of a new-born infant?—it may become a man.*"

the shoulders are raised at each inspiration, the muscles of the throat and neck are violently drawn, and the lips and nostrils move in time with the general action. If he does not breathe through his mouth, the nostrils expand, and fall in time with the rising and falling of the chest, whilst the curious apparatus of cartilages and muscles of the nose, are as regularly in action as the levator and depressor muscles of the ribs.

"It is quite obvious, that some hundred muscles thus employed in the act of breathing, or in the common actions of coughing, sneezing, speaking, and singing, cannot be associated without cords of connexion or affinity, which combine them in the performance of these actions; the nerves which serve this purpose I call respiratory nerves." P. 6.

Mr. Bell observes, that the nerves of all animals, including man, may be divided into two systems or classes—into those destined for the organization necessary to life and motion in an animal—and those which supply organs superadded as the animal advances in the scale of existence. The nerves of the spine, the tenth or sub-occipital nerve, and the fifth or trigeminus, belong to the simple and symmetrical system.

"All these nerves agree in these essential circumstances; they have all double origins; they have all ganglia on one of their roots; they go out laterally to certain divisions of the body; they do not interfere to unite the divisions of the frame; they are all muscular nerves, ordering the voluntary motions of the frame; they are all exquisitely sensible; and the source of the common sensibility of the surfaces of the body: when accurately represented on paper, they are seen to pervade every part; no part is without them; and yet they are symmetrical and simple as the nerves of the lower animals.

"If the nerves be exposed in a living animal, those of this class exhibit the highest degree of sensibility; while, on the contrary, nerves not of this original class or system, are comparatively so little sensible, as to be immediately distinguished; insomuch that the quiescence of the animal suggests a doubt whether they be sensible in any degree whatever. If the *fifth nerve and the portio dura of the seventh*, be both exposed on the face of a living animal, there will not remain the slighest doubt in the mind of the experimenter which of these nerves bestows sensibility. If the nerve of this original class be divided, the skin and common substance is deprived of sensibility; but if a nerve not of this class be divided, it in no measure deprives the parts of their sensibility to external impression." P. 10.

The nerves connecting the internal organs of respiration with the sensibilities of remote parts, and with the respiratory muscles, are distinguished from the above by many cir-

cumstances. They have not double roots, nor ganglia on their origins. They come off from the *medulla oblongata* and the upper part of the spinal marrow, and from this origin they diverge to those several remote parts of the frame which are combined in the motion of respiration. These are the nerves which give the appearance of confusion to the dissection, because they cross the others, and go to parts already plentifully supplied from the other system. The following are *respiratory nerves*, according to their functions.

1. The *par vagum*, distributed to the larynx, lungs, heart, and stomach, associating these organs together, though they are plentifully supplied with nerves from other sources.

"Comparative anatomy would lead us to infer that this nerve is not essential to the stomach, as it does not exist but where there are heart and lungs to associate with a muscular apparatus of respiration. That the stomach must be associated with the muscular apparatus of respiration, as well as the lungs, is obvious, from the consideration of what takes place in vomiting and hiccough, which are actions of the respiratory muscles excited by irritation of the stomach." P. 11.

2. *Respiratory Nerve of the Face*, or portio dura of the seventh. This nerve also goes off from the *medulla oblongata*, spreads wide on the face, and on it *solely* depend all those motions of the nostrils, lips, and face generally (as will presently be shown) which accord with the motions of the chest in respiration. By the division of this nerve the face is deprived of its consent with the lungs, and of all expression of motion.

3. *Superior Respiratory Nerve* of the trunk, or spinal accessory, which has puzzled physiologists on account of the singular course which it pursues. After arising from the upper part of the spinal marrow, in a line with the roots of the other respiratory nerves, it passes into the skull, and comes out with the par vagum, descending upon the neck, supplying muscles of the shoulder already profusely supplied with nerves from other sources. This nerve controls the operations of the muscles of the neck and shoulder in their office as respiratory muscles, when by lifting the shoulders they take the load from the chest, and give freedom to the expansion of the thorax. When this nerve is cut across in experiments, the muscles of the shoulder, which are in action as respiratory muscles, cease their co-operation, but remain capable of voluntary actions.

4. *The internal Respiratory Nerve*—phrenic or diaphragmatic. This is the only nerve of the system usually considered respiratory. Its origin, course, and destination are familiar to all. But there is another nerve much resembling it, which has been entirely overlooked. It is—

5. *The external Respiratory Nerve*, which has its origin with the preceding nerve, coming from the cervical vertebræ, and being connected with the phrenic nerve. It runs down the neck, crosses the cervical and axillary nerves, passes through the axilla, and arrives on the outside of the ribs, where, it is hardly necessary to observe, the muscles are already supplied by nerves coming out betwixt the ribs from the system of regular nerves.

"These four last mentioned nerves govern the muscles of the face, neck, shoulders, and chest, in the actions of excited respiration, and are absolutely necessary to speech and expression. But there are other nerves of the same class which go to the tongue, throat, and windpipe, no less essential to complete the act of respiration. These are the glosso pharyngeal nerve, the lingual, or ninth of WILLIS, and the branches of the par vagum to the superior and inferior larynx." P. 13.

The nerves of the face afford the best illustration of the foregoing doctrines. The human countenance performs many functions—mastication, breathing, natural voice and speech, expression of the passions and emotions.

Trigeminus. In all animals that have a stomach, with palpi

nications nerves go in both directions—branches of the seventh are sent to the membrane of the nose, and to the muscles at the back of the palate—while branches of the fifth nerve, and also of the sympathetic, are brought into the interior of the ear. By the corda tympani, branches of this respiratory nerve have access to the velum palati and its muscles. After the nerve emerges on the face every anatomist knows what an extensive range it takes, penetrating to all the muscles—muscles already amply supplied by branches of the fifth pair. The descending or inferior branches of the portio dura going under the lower jaw and to the superficial muscles of the throat and neck, are connected with branches of the spinal nerves, and with the respiratory nerves.

The *structure* of this nerve Mr. Bell has found to differ from that of the fifth pair, and to correspond with that of the par vagum.

The question now naturally occurs, whether these nerves perform the same function? whether they furnish a double supply of the *same* property or endowment—or whether they do not perform different offices? This question is now to be decided by experiment.

"*Experiment.* An ass being thrown, and its nostrils confined for a few seconds, so as to make it pant and forcibly dilate the nostrils at each inspiration, the portio dura was divided on one side of the head; the motion of the nostril of the same side instantly ceased, while the other nostril continued to expand and contract in unison with the motions of the chest.

"On the division of the nerve, the animal gave no sign of pain; there was no struggle or effort made when it was cut across.

"The animal being untied, and corn and hay given to him, he ate without the slightest impediment.

"An ass being tied and thrown, the superior maxillary branch of the fifth nerve was exposed. Touching this nerve gave acute pain. It was divided, but no change took place in the motion of the nostril; the cartilages continued to expand regularly in time with the other parts which combine in the act of respiration; but the side of the lip was observed to hang low, and it was dragged to the other side. The same branch of the fifth was divided on the opposite side, and the animal let loose. He could no longer pick up his corn; the power of elevating and projecting the lip, as in gathering food, was lost. To open the lips the animal pressed the mouth against the ground, and at length licked the oats from the ground with his tongue. The loss of motion of the lips in eating was so obvious, that it was thought a useless cruelty to cut the other branches of the fifth.

"This experiment of cutting the respiratory nerve of the face, or *portio dura*, gave so little pain, that it was several times repeated on the ass and dog, and uniformly with the same effect. The side

of the face remained at rest and placid, during the highest excitement of the other parts of the respiratory organs.

"When the ass, on which the respiratory nerve of the face had been cut, was killed, which was done by bleeding, an unexpected opportunity was offered of ascertaining its influence, by the negation of its powers on the side of the face where it was cut across." 18.

"In this ass, where the respiratory facial nerve was cut, the most remarkable contrast was exhibited in the two sides of the face, while the animal was dying; for, whilst the one side was in universal and powerful contraction, the other, where the nerve was divided, remained quite placid.

"From these facts we are entitled to conclude, that the *portio dura* of the seventh, is the respiratory nerve of the face; that the motions of the lips, the nostrils, and the velum palati are governed by its influence, when the muscles of these parts are in associated action with the other organs of respiration. These passages to the lungs are membranous tubes, moved by muscles, which serve to expand and widen them, so that the air may freely enter into the lungs. It is obvious that to produce this, these muscles must have a consent with the other muscles of respiration, and move simultaneously with them; and this is effected through the respiratory nerve of the face. It shall be proved in the sequel, that the throat, neck, shoulders, and chest, have similar nerves to this, similar in structure and function, and that these unite all the extended apparatus of breathing and speaking." 19.

The actions of sneezing and coughing are entirely confined to the influence of the respiratory nerves. When carbonate of ammonia was put to the nostrils of the ass, that side of the

nerve. A man had the trunk of the respiratory nerve of the face injured by a suppuration, which took place anterior to the ear, and through which the nerve passed in its course to the face. It was observed that, in smiling and laughing, his mouth was drawn in a very remarkable manner to the opposite side. The attempt to whistle was attended with a ludicrous distortion of the lips; when he took snuff and sneezed, the side where the suppuration had affected the nerve remained placid, while the opposite side exhibited the usual distortion." 21.

Thus it appears that, whenever the action of any of the muscles of the face is associated with the act of breathing, it is performed through the operation of this nerve. Mr. Bell cut a tumour from before the ear of a coachman, and divided a branch of the nerve which goes to the angle of the mouth. Some time afterward the man returned to thank Mr. Bell for ridding him of a formidable disease, but complained that he could no longer whistle to his horses.

Mr. Bell makes many ingenious observations and experiments on the functions of the trigeminus or fifth pair, to which we cannot do justice in this place.

"By an experiment made on the 16th of March, it was found, that on cutting the infra-orbitary branch of the fifth nerve on the left side, and the *portio dura*, or respiratory, on the right side of an ass, the sensibility to pain on the right side, where the *portio dura* of the seventh nerve was cut, remained entire, while that of the left side was completely destroyed by the division of the fifth. It was also apparent in this experiment, as in the others, that there was the most marked difference in the sufferings of the animal, when these nerves were cut across. The cutting of the fifth nerve gave pain in a degree corresponding with our notions of the sensibility of nerves; but in cutting the *portio dura*, it was not evident that the animal suffered pain at all." 22.

Some people may ask, to what does this discussion lead after all?—It may be answered, that both the surgeon and physician are interested in knowing that two sets of nerves are distributed to the face, having distinct functions. To the surgeon, this knowledge must prove useful, in performing operations on the face, as well as in observing the symptoms of disease; but to the physician these facts are peculiarly important, as—

"He will be better able to distinguish between that paralysis which proceeds from the brain, and that partial affection of the muscles of the face, when, from a less alarming cause, they have lost the controlling influence of the respiratory nerve.

"Cases of this partial paralysis must be familiar to every medical observer. It is very frequent for young people to have what is vulgarly called a blight; by which is meant, a slight palsy of the

IX.

A brief View of the Yellow Fever, as it appeared in Andalusia, during the Epidemic of 1820 : *together with the Mode of Treatment adopted, and an Account of the Appearances on Dissection. To which is prefixed, a short Topographical Sketch of the Country.* By THOMAS O'HALLORAN, Esq. Octavo, pp. 171. London, 1821.

THE dreadful epidemic of which this work treats, has, as usual, suspended its ravages till the elements are again disposed to reproduce it—or, until ignorance, prejudice, or crooked policy, shall invent a new tale of its importation from a distant soil. The best historical records inform us, that the first great sickness that nearly depopulated Cadiz, appeared in 1466. A similar event took place in 1507. The epidemic of 1582 is *said* to have ceased through the intercession of St. Roque! It was not, however, until the year 1730, that the disorder, since known by the name of "el vomito negro," or black vomit, first made its appearance, and swept off great numbers of the inhabitants. In the year following it was equally dreadful, exhibiting spots of a livid yellow, or dark colour, that covered the body, and were the certain forerunners of the black vomit. Don Josef Cervi, physician to Charles the Third, declared that it was *not* the plague; and Don F. Navarette affirmed that this disease (el vomito negro) was introduced into Cadiz, by *a vessel from Spanish America* —a tale that has been repeated by one *importer* after another, down to the present day, when it has become, not only flat, stale, and unprofitable, but also exceedingly pernicious.

In 1764, a similar disorder appeared in Cadiz, which was witnessed by our immortal countryman, Dr. Lind, who has written an account of the disease. Dr. Salvaresa, a famous Spanish physician, has also written a Latin account of the same epidemic. Both accounts exactly agree in describing the disease, precisely as it has appeared in the late epidemic; but Salvaresa says nothing about its being contagious—on the contrary, he attributes it to atmospheric causes and corrupted corn, while Lind so wavers in his opinion, that nothing decisive can be gleaned from it.

During a period of sixty years after the last-mentioned fever, Cadiz remained healthy, notwithstanding the progressive increase of population. The last months of 1799, and the beginning of 1800, were characterized by remarkably severe weather, so that, at the end of May, there was scarcely any appearance of Spring. All at once, however, "the heat of Summer (we quote Sir James Fellowes, a deci-

ded contagionist and *importer*) set in from the *beginning* of June, and by the month of August, the mercury was 90° Fahrenheit, while the *Levanter* tended to increase the distress, which the intense heat of the weather generally occasioned."*

During the months of June and July, no material alteration took place in the public health; but in the beginning of August the scene began to change. A fever broke out in the district of St. Maria, (the residence of poverty, the theatre of filth, where are situated the posadas, taverns, and lodging houses, for the dregs of society) whence it radiated in all directions, and in whatever house it appeared, all the family was ultimately attacked. About the middle of August, all heads were laid together to discover the cause and origin of the epidemic, and, as in all such cases, the Junto pitched upon a ship, the Dolphin, from Spanish America, on board of which ship, some smugglers from the shore had been, and must, of necessity, have brought the infection into the town.

By the middle of September the diurnal mortality amounted to 200, and Cadiz presented a most melancholy scene of mourning and desolation. At this time, according to the statements of the contagionists and importers themselves, and among others Sir James Fellowes, the disease *imported from Spanish America* spread to domestic and other animals, and *dogs and cats* were seen dying with the *black vomit*. The very horses died. This is a fair specimen of the credulity of the *importers*—whose creed indeed appears generally to be —" credo *quia* impossibile." But the worst of it is, that credulity is almost always accompanied by an illiberal and overbearing disposition, which endeavours to stifle fair and rational investigations of truth, by its imperious ipse dixits. We every day see examples of this, both at home and abroad, but we shall here notice a remarkable instance in point. Mr. Doughty, a zealous and intelligent surgeon, who had seen and suffered from yellow fever in the West Indies, and who acted under Sir James Fellowes at Cadiz, in 1810, readily recognised a striking similarity, if not an identity, between it and the fever at Cadiz. This officer having opened some bodies, and found the most decisive marks of inflammation in some of the internal organs, reported the same to Sir James Fellowes, but that cautious physician never acknowledged the receipt of the letter, nor took any notice of it in his publication. Nay, because Mr. Doughty stated in a letter to the Duke of Kent that he was the only officer who had re-

* Reports, p. 33

course to dissection, he was brought to a court martial by Sir James, and dismissed the service. Mr. Doughty states, "that he never had the honour of seeing Sir James Fellowes by the side of any one of the many bodies he opened." No, no. The contagion importers act on a very different principle. Like Falstaff, they are mighty shy in the engagement, but once they get to a distance from the scene of action, we are deafened with the narratives of what they have seen and done.

It would be endless to notice the absurd tales invented by *importers* of contagion. Thus when, in 1810, the fever raged at Barcelona, Dr. Risneno, Physician to the Spanish Hospital there, positively asserted that the contagion was brought *from* Gibraltar and Cadiz; while Dr. Pym as positively asserts that it was brought *to* Gibraltar from Carthagena!

Our readers are aware that the doctrine uniformly advocated in this Journal, and we believe very generally admitted in this country, is that of *contingent* contagion in fever. We are not so mad, or so blinded by prejudice, as to believe with the ultra or *importing* contagionists, that the epidemics which have, from time to time, ravaged Spain, America, the coasts of the Mediterranean, and other parts of the world, were never of local origin in those places, but always transmitted by bales of goods or other vehicles from distant sources; nor can we agree with the anti-contagionists that such fevers, when once produced by aerial or terrestrial influence, are totally incapable of communication from individual to individual afterward. But we do most solemnly protest against that barbarous doctrine which would barricade the sick, like so many rabid animals, and leave them to *form* an increasing focus of that contagion which it ought to be the duty of the physician and legislator to dilute, dissipate, and prevent. We consider plague as a distinct disease, *sui generis*, and do not object to its circumvallation. But to throw cordons of troops round those places where the *causes* of the fever are perpetually extricating themselves from the soil, at particular seasons, and thus prevent the wretched inhabitants from leaving the insalutary city or district, is one of the greatest cruelties that purblind man was ever permitted, by Providence, to inflict on his fellow-creatures. It is a measure disgraceful to medical science, because it is contrary to the best established principles upon which we act—it is disgraceful to human nature, because it violates and uproots all feelings of charity and philanthropy towards those who are most entitled to our commiseration, and most in need of our assistance. In every quarter of the globe medical evidence is fifty to one in favour of separating the sick, and removing them

out of the sphere both of the febrific causes that first produced them, and the accumulated effluvia emanating from their own bodies afterward. The records most worthy of credit prove satisfactorily that the above measures may be carried into effect, with perfect security to those residing in the vicinity of places affected with endemic and epidemic fevers. On the western side of the Atlantic this scarcely admits of a doubt, even among the contagionists of those countries; and as the *importers* trace the fevers of Spain to the new world, they must admit them to be governed by the same laws on one as on the other side of the Atlantic. As for expecting any thing like scientific information or independence of opinion from the Spanish practitioners themselves, it is quite useless. The degraded state of medicine in Spain is ably and forcibly drawn by Don Matéos, of Madrid, in his "Philosophy of Legislation," from which we shall make a few extracts for the edification of those few in this country who place implicit faith in the contagion creed of their Spanish brethren.

"Why then does medicine continue among the Spaniards in a state of infancy, bordering on barbarism? It is because the most noble and useful of professions is there regarded as a vile trade or contemptible occupation! It is because medical students, reduced by turns to mendicity or servitude, are classed with the apprentices of masons and shoemakers! That man must be imbued with a more than ordinary philanthropy, who could dedicate genius or talent to a profession so unjustly, so unwisely dishonoured."

"The importance of public hygiene is generally acknowledged; but its utility is not sufficiently appreciated. Governments have not duly estimated the value of medical philosophers; and it is to a neglect of their council, that our prisons, barracks, and hospitals have become, in turns, the most frightful depôts of pestilence, and too often the graves of their wretched inhabitants! The practice of interment in churches is an abomination; it is to burn an incense on the altars of the Almighty, the odour of which may spread infection like pestilential miasmata!"

Don Matéos ranks himself among the anti-contagionists, and asserts that the dreadful fevers which devastated Madrid in 1803-4, presented the characters of inflammation—were rarely of a putrid nature—and required the constant operation of antiphlogistics, particularly blood-letting, which was of singular efficacy. The picture which this enlightened Spaniard draws of a public hospital is frightfully melancholy to contemplate.

"Figure to yourself," says he, "a vast edifice, whose architecture is calculated to astonish by its majesty, or please by its elegance, but whose construction is devoid of every thing that can contribute

to salubrity! The medical officers are never consulted in any part of the fabrication or internal economy of the institution. Under the appellation of HEALERS (guérisseurs) the physicians, badly paid, and little respected, sink into insignificance, and become as careless and negligent as the host of menial attendants. The miserable patient, who hopes for succour and consolation from his doctor, can scarcely address him when he is passed by without an answer! Charged with the office of visiting a great number of sick, the physician sees little or no sickness. The food and the medicines most slovenly prepared, are still more negligently distributed. The linen, and other furniture of the kind, are bad in quality, and not regularly changed. The atmosphere of the wards is impregnated with fetid exhalations, and no means of ventilation or purification are put in force to remedy the evil. In vain does the unhappy patient look around for some sensible being who may commiserate his sufferings —wherever he turns his eyes, the most doleful objects are presented to his view. Abandoned by their parents or friends, overwhelmed with chagrin and sickness, some are poisoned by the blunders of the stupid apothecary, while others fall victims to the ignorance of the surgeon, who having made three or four unsuccessful attempts on the vein, in the fifth goes dash into the artery!"

Don Matéos concludes his work by deploring the profound state of abjection into which the healing art is plunged in Spain.

"Will it be believed," says he, "that in the Universities the Professors of Divinity, of Law; nay, even the Tutors themselves, would blush to be seen in company with the Professors of Medicine! The most petty artisan would be despised by his fraternity if he brought up his son as a Physician! The Government promotes, with all its influence, this strange perversion of ideas, this worse than Vandalism! It heaps humiliations on the heads of those benefactors of mankind; and seems to fear lest the learned Physician and Philanthropist should unmask sacrilegious abuses, and lay open those crimes which, though *authorized*, are not the less detestable."

After reading these extracts, will professional men on this side of the Channel expect to reap any other information from the health officers of Andalusia than what may happen to suit the views of their Government? No, indeed! The doctrine of importation will, of course, be the doctrine of Government, and it will be that vociferated by the health-officers in its employ.

We now come to Mr. O'Halloran's work. Our readers are aware that in our last number we gave an account of Dr. Jackson's essay on the same epidemic,* wherein was

* One of our cotemporaries has hinted that we have not given quite a fair representation of Dr. Jackson's work or sentiments; but we appeal to the

mentioned the zeal and intelligence of Mr. O'Halloran, who accompanied our venerable countryman through this arduous and dangerous undertaking.*

Mr. O'Halloran's work is divided into seven chapters, and an appendix. The first chapter presents an interesting topographical sketch of Andalusia, from which we shall extract a few particulars. The River *Tinto*, deriving its name from the yellow colour of its waters, rises in the Sierra Morena mountains, and has the property of petrifying and hardening sand, in less than a year, and forming into large masses those stones which happen to come into contact with one another. No verdure is seen on its banks—no fish can live in its stream. An immense plain, extending sixteen or seventeen miles along the banks of the Guadalete, and approximating the town of Xeres, near the Carthusian Convent, "*is usually inundated, during the heavy rains of winter and of spring, and is not entirely dry even in the hottest weather.*" We beg to draw the attention of our brethren to this fact, for every one who knows any thing of medical topography, must be convinced, that such a situation is peculiarly well calculated to produce fever, whenever the state of the air is favourable for the extrication of those febrific agents, that are known to have their fons et origo in such localities. At the extremity of the above-mentioned flat, near St. Lucar, a river takes its rise, and, after a circuitous route, empties itself into the Guadalete, close to the Carthusian convent. "*The bed of this river is partly dry in summer.*"

"It is to the country watered by this river, which for the most part is inundated during the winter months, that the ancients are supposed, by some, to have given the name of the Elysian Fields; while the river which runs nearly at a right angle with the former, was called the GUADALETE, or river of *Oblivion*. It is not, perhaps, surprising that the country in the *vicinity* of those rivers should have been denominated the "fields of bliss;" but how a muddy river, bounded on both sides by swamps of considerable extent, from PUERTO SANTA MARIA to the mountains near ARCOS, and without a single tree to embellish its banks, could have been taken for the celebrated river LETHE, I am at a loss to conceive." G.

The town of Xeres itself, stands somewhat elevated at the extremity of this plain, commanding an extensive view of those elysian fields. "It is nearly surrounded, during the

author himself, and to the public at large, for the fidelity of our analysis on that, and every other occasion, without the slightest fear of being found wanting on the side of either correctness or candour.—*Rev.*

* See page 487, vol. ii.

prevalence of heavy rains, by swamps, the smallest of which is close to the town, and the greatest, at a distance of about three miles." Intermittent and remittent fevers, *annually* attack the inhabitants in great numbers, being "exceedingly difficult of management, and not unfrequently fatal in their termination." P. 8. Who but an *importer* would be blind to such obvious sources of disease, or obstinately insist, that contagion was annually smuggled in here, at one particular season of the year, but never at any other season?

Xeres is three miles in circumference, and contains 40,000 souls. It has a few broad, and tolerably well-paved streets, and some high and well-ventilated houses in the centre of the town.

"But in other parts, with the exception of two small squares, the houses are ill constructed, the streets narrow, and either badly paved or not at all. But the worst is, that the streets in general, throughout their whole length, are covered in the centre with filth and ordure of all hues, collected from every house, so that passengers have only a narrow footway upon which they can walk with cleanliness or safety. Pools of black, stinking, stagnant water appear on the different streets, with few exceptions; and the intermediate spaces are covered with solid filth, which, when disturbed by the wheel of a carriage, or any other accidental occurrence, emits a stench that is absolutely intolerable to persons unaccustomed to it, not merely disgusting the sense, but, in many instances, actually turning the stomach. This loathsome condition of the town is, of course, ascribable to scarcity of sewers or drains to carry off the impurities which are daily and hourly thrown into the streets, where they are allowed to remain a perpetual memorial of the filthiness of the inhabitants. Some of the streets in the suburbs, where the poorer classes dwell, are dirty beyond description; a horse will sink to the knees in one of them, while the foot passenger makes a perilous progress by path-ways so narrow as scarcely to permit two abreast. The houses are low, crowded, ill-ventilated, and commonly dirty within. The fronts are usually long; and a door in the centre serves for the entrance into the house, and to a square yard, or court, which is generally formed in the rear, by the junction of four different dwellings, the abodes of several families. The houses here being, in general, but one story high, become insufferable from the direct application of a burning sun during the summer and autumnal months. The tiles with which the roofs are covered, are heated to such a degree, as to make the inside a perfect oven, not inhabitable by persons unaccustomed to such exhausting and sickening heat. It often happens in these squares, that every room is the abode of a separate family; a solitary door giving ventilation and light to one or more apartments in which the several miserable objects are crowded together, with scarcely any accommodation except the mantas or rugs which they spread on the bare ground, and upon which they lie. Those ill-of

fever, or other disease, are placed in the corner of the room, whilst the rest occupy the other parts of the same chamber, for days and nights, without the slightest repugnance or apprehension of danger." P. 11.

Let the *importers* of contagion peruse the above extract, and let every rational and unbiassed man, in this country, judge of the insanity, not to say inhumanity, of that horrible doctrine, that would circumvallate human beings, afflicted with endemic or epidemic diseases, in such pestiferous abodes!

"It is under circumstances such as I now describe," says our author, "where ten or fifteen persons occupy the same ill-ventilated room, that disease commits its most terrible ravages; few, in such cases, escaping with life, when seriously attacked." 12.

Seeing then, that humanity is deeply interested in counteracting that detestable doctrine of importation, which entails such misery on thousands and tens of thousands of innocent people, we deem it our duty to give all possible circulation to those *facts* collected by our own countrymen, on which we can better depend than on the interested and distorted *reports* of foreigners. On this account, we entreat the patient attention of our readers, and the most deliberate consideration of all those who feel for the afflictions of their fellow-creatures, and desire to see truth prevail over ignorance and barbarous policy.

The rains which fall in Andalusia during the autumnal months are abundant, and the face of the country, from being dry and parched, quickly assumes the pleasing aspect of reviviscence. The months of May, June, July, August, and September, are particularly hot and dry. In October the rains descend in torrents for days and even weeks together. The thermometer averages, in the hot months before mentioned, from 73 to 82 of Fahrenheit;—from November till May, it ranges from 50 to 75. The Levant winds produce great languor and lassitude, even in the strongest constitutions; and it has been remarked by the inhabitants of sea-port towns in the South of Spain, that the yellow fever, or some epidemic, has of late years invariably prevailed when excessive heat succeeded a prevalence of the Sirocco winds.

The second chapter of the work before us consists entirely of meteorological tables, and therefore must be passed over. The third chapter contains many judicious and curious observations on contagion, &c. to which we cannot do justice. We fully agree with Mr. O'Halloran, in considering the fever as of local origin in the beginning; but we are not disposed to come to his conclusion, that it is never personally contagious afterward, because such a conclusion does not

tally with our own observations on other fevers, or the observations of our best writers, ancient and modern.

Our author informs us that, till very lately, the Spanish physicians were impressed with the firm belief, that yellow fever was contagious in the most unlimited sense of the word, but that latterly their faith in contagion has been shaken. Some of them have even ventured to doubt, in their writings, the probability that yellow fever can be communicated by intercourse between the healthy and the sick—*in atmospheres not epidemical.* Still, however, they think and act with all their original prepossessions. In respect to the opinion of our author himself, it is as follows :—

"If it were possible in one hour to remove an hospital, filled with patients labouring under the worst forms of this disease, from *Seville* to *London*, not a single individual of these countries would be affected by the importation." 36.

We believe this to be true, or nearly so—that is, we think that did the disease spread to a few in immediate attendance on the sick, yet that it would go no farther, and would very soon become extinct. However this may be, our author, who certainly had better means of information than any of his countrymen, thinks he can show, by cases which occurred under his own eye, that the fever in question is not a contagious disease, even on its own soil—in other words, that it cannot be communicated by *clothes*, *contact*, or *near approach*. That persons engaged in the performance of offices for the sick, suffer in a greater proportion than those who are not, our author admits, but he endeavours to show, that the fever is incommunicable by contact, or near approach, "unless a previous derangement of health predisposes to such an event." Innumerable instances, he observes, occurred in the course of his attendance upon patients labouring under yellow fever, "wherein persons *in full health*, were constantly occupied about the sick, without being at all affected"—a fact which he thinks conclusive evidence, that fever is not necessarily or inevitably contagious. We do not entirely subscribe to this inference. People in prime health, and of firm, intrepid minds, are known to resist all contagious diseases, much more than the weakly and pusillanimous.

It was on the 23d September, 1820, that our author arrived at Xeres, and undertook the treatment of a disease, upon which the Spanish faculty seemed able to make but little impression He commenced this duty, without the slightest apprehension of personal danger, on his part, in consequence of having observed, and found it generally observed, that the yellow fever of tropical climates was not contagious. A short

sojourn in Xeres convinced our author that truth was not to be found in hearsay, or candour to be expected from men whose minds were made up and locked against conviction. He therefore determined upon collecting such materials himself, as would enable him to form a correct judgment on the subject. Mr. O'Halloran's *modification* of personal contagion will be understood from the following short extract.

"But although propagation from person to person is not evident, there are certainly grounds for the supposition, that in the ill-ventilated apartments of the sick, a noxious material emanates from the subject which alters the salubrious quality of the atmosphere to such a degree, as sometimes to render it unfit for supporting the necessary actions conducive to health, and thereby indirectly to produce fever." P. 45.

It is proper to observe, that this nice distinction can hardly be expected in practice; but, at all events, it is to be remembered that the disease seldom originates in this way (personal infection, or febrific atmosphere) in airy apartments. Its attacks are confined, as he justly remarks, to ill-ventilated houses, where the noxious effluvia produced by disease are increased in activity by the aggregation of subjects in a narrow space. It is equally true, that a person exposed to a limited quantum of air enveloping those ill of fever, soon experiences, especially if of a susceptible habit, a degree of indisposition; and, even if he resists a regular attack of fever, his stomach and bowels become more or less deranged, partly from the offensive air which he breathes, and partly from the impression made upon his mind by the melancholy scenes around him.

"It is the effect of this vitiated air of ill-ventilated houses which has impressed the community with the notion of the highly contagious properties of yellow fever; for it is taken for granted, that all those who sicken hold direct communication with the infected, never considering that thousands, such as nurses and other attendants, in whose arms the dissolution of patients often occurs, and upon whose bodies, clothes, &c. the blood and black vomit are frequently thrown, escape its attacks. The instances which I myself have seen, during my treatment of the disease at Xeres, in proof of the fact as to nurses and other attendants not apparently suffering in greater proportion than those who were simply exposed to the ordinary atmosphere or the air of the sick chamber, are so numerous as to leave little doubt on my mind as to the non-existence of personal contagion in the epidemic yellow fever of Andalusia, as it appeared in 1920." 46.

Our author observed, that although persons who breathed the infected air of sickly houses, suffered more than those who walked the streets—yet that the *latter* did not suffer in greater proportion, than those who secluded themselves from all in-

tercourse, and who, consequently, were only exposed to the common epidemic cause which obviously pervaded all points within the epidemic town.

Upon entering the habitations of the poorer classes, the impure condition of the atmosphere (even when imperceptible by the sense of smelling) was indicated by a sensation of dryness in the mouth, an inclination to spit, a preternatural excitement or working of the abdominal muscles, and not unfrequently nausea or vomiting, succeeded by black viscous stools and slight pyrexia.

In Xeres the first manifestations of disease were usually in the stomach and alimentary canal, producing, in many cases, a total change in their secretions and excretions, often terminating in fever, if neglected. Mr. O'Halloran here notices a curious fact, which was, that in apartments which could not have undergone any change by the admission of fresh air, the atmospheric condition evidently underwent alterations, for which our author never could account—those changes occurring in the course of a single day.

"For it often happened, that the sick person who, at one moment, could not be approached, from an effluvium of which words can convey no idea, might be particularly examined at the termination of an hour, without any offence to the olfactory nerves of his attendants. It appeared to me to be difficult precisely to discover at what periods of disease these changes occurred: they seemed to have possessed a higher degree of intensity during the stages of excitement, on the first and second day, than at any other period." P. 49.

The Spanish physicians, although apparently advocates for ventilation, do not practice what they preach, while the people consider seclusion of light and air as actually necessary for the recovery of the sick.

"They imagine that the indication of cure, in fever of all types, consists in producing a determination to the surface; and to insure this effect the windows and doors are closed, the chamber is heated by means of heated charcoal which emits little smoke, and the patient is covered up in bed with an enormous quantity of clothes, in order to force a sweat. It is under circumstances of this nature, where persons are crowded together in dark, ill-ventilated houses, that the disease spreads rapidly; and this has impressed the bulk of the people with an idea of the highly contagious properties of yellow fever." P. 50.

Fear is well known to predispose to fever, and that is the reason assigned by Spaniards why persons who seclude themselves from intercourse, fall in as great a proportion as those who walk the streets. Our author agrees with

other practitioners in considering people who have once undergone an attack of yellow fever, to be little susceptible of a repetition of the same. But this immunity is far from being without many exceptions. Mr. O'H. relates some curious instances of the effects of fear in developing fever—one is not a little remarkable. Mr. Gomez avoided intercourse as much as possible, under the idea of securing himself from infection; but was one day forcibly seized by a gentleman much in the habit of frequenting sick chambers, with the view of frightening Mr. Gomez. The latter gentleman, however, quickly sickened of fever and died! The remainder of this chapter is occupied in the recital of numerous cases of the fever, for which we must refer to the volume itself. The fourth chapter is on the symptomatology of the disease as it appears in the sanguine temperament. We shall not enter on this chapter, because the subject of it was sufficiently treated of in our last number, when reviewing Dr. Jackson's work. The fifth chapter is on the treatment of this form of the fever, from which we shall make some notes.

In this form there is little time for consideration; for if the first few hours are allowed to pass away without some bold and decisive measure, all subsequent attempts will be fruitless. This form, from its history and appearances on dissection, is incontestibly inflammatory. When seen early Mr. O'Halloran recommends the patient to be immediately immersed in a warm bath, of the temperature of 100°, where he is to remain for fifteen or twenty minutes, till the whole body is cleansed by means of coarse cloths or flesh-brushes. When put to bed a vein is to be opened in both arms, and the blood allowed to flow until the pulse undergoes a decided change, or syncope supervenes. Our author has tried it in several instances with decided benefit. In some it appeared to cut short the disease—in others, it was succeeded by copious sweats and alvine discharges—in all, if carried to a sufficient extent, it removed the headach and general distress. In short, Mr. O'Halloran thinks he is authorized in believing that, were other auxiliaries at hand which are necessary for the successful treatment of fever, the extensive use of venesection would render the mortality of the Spanish fever comparatively trifling—not perhaps exceeding one in twenty, at least as far as could be judged by the epidemic of 1820.

The Spanish physicians have, for many years past, been greatly prejudiced against bleeding in fevers. But the arrival of Dr. Jackson in Cadiz, and the great success attending copious venesection in the case of Dr. M'Gibbon, induced some of them to try the effect of the remedy, and an official

publication in the Mercantile Diary of Cadiz, dated the 25th September, 1820, gives ample proof of the success of the experiment.

After venesection a brisk cathartic of calomel and jalap is recommended to be given. If these are slow in operation, enemata are to be thrown up—and, these failing, a stimulating draught composed of tincture of myrrh and aloes, or of jalap and rhubarb. Being bled and purged, if much irritability of the stomach be present, a very large blister should be applied to the epigastric region, and effervescing draughts taken every hour according to the urgency of the symptoms. If, after this, the headaches should return, which does not often happen, the head is to be shaved, and blisters applied to the temples and nape of the neck, while cold lotions are to be kept constantly applied to the scalp. Ten hours from the commencement of the attack *pediluvia* are preferred by our author to the general bath. This foot bath was found very serviceable in Xeres, by producing copious sweats, allaying irritation, and inducing sleep. If this plan be vigorously pursued during the first day, it will generally be found sufficient to arrest the disease *in toto*.

"On the second day, and even on the first, if the disorder be violent, CALOMEL and JAMES'S POWDER, in form of pill, given in the proportion of five grains of the former to four of the latter, every second hour, will be found an *invaluable medicine*. This combination, notwithstanding the nauseating effects of the James's Powder, is frequently found to remain on the stomach when nothing else will. It maintains an open state of the bowels, without producing that distressing and alarming purging which too often arises from the operation of drastic purgatives; while, by its operation on the system at large, it produces the most salutary effects." 93.

The warm bath is to be repeated on the second day, and if the symptoms indicate the necessity of the lancet, a vein is to be opened, and while the body is immersed, a large quantity is to be abstracted.

"If the irritation of the stomach still continues, the effervescing draughts, with the liq. ammon. acet. and tincture of opium, may be repeated; or a weak solution of the superacetas plumbi, or the sulphas zinci, should be administered, as it frequently restrains the vomiting, without superseding the purgative effects of the calomel." P. 94.

On the third day, if the system is not under the influence of mercury, Mr. O'Halloran thinks it advisable to continue the calomel pills, conjoining ammonia, camphor, and opium, with the view of exciting artificial action. In the majority of instances, however, Mr. O'H. observes, the patients treated

in the manner described will be under the influence of mercury on the third day, "after which his recovery is certain and rapid. He will generally walk about on the seventh day." 95. Our author states that, without a single exception, throughout the whole period of the epidemic, every patient in whom *ptyalism* could be induced, recovered. He insists upon the state of ptyalism, because he has seen many instances, in which the mouth and gums became sore and ulcerated, but *without any salivary discharge*, and where the patients did not recover. Several cases carefully detailed close this chapter of the work.

The sixth chapter is on the symptoms of the epidemic, as manifested in the *nervous* or *serous* temperament. This form of the fever is by far the most common and dangerous. It is particularly characterized, in the commencement, by a deficiency of vital heat—impaired sensibility—and a withering, as it were, of the whole frame. The patient, apparently in perfect health, is struck by some power that at once deprives him of all his energies, "transmutes him to a living corpse, and marks him for the *grave*." The patient, when questioned as to his state, can give no rational account of himself, but mutters incoherently when spoken to. He is usually peevish, fretful, and chilly, about the period of investigation —the chills sometimes continuing for a few minutes only—but generally terminating about the third or fifth hour.

There is no evident symptom of fever, Mr. O'H. observes, present at this period.* The tongue is clean, the skin cool and dry; but the eyes are blood-shot, and the countenance is stupid and comatose. Headach and pains in the extremities soon set in, increasing in violence as the chills diminish. A caustic febrile heat supervenes, first about the head, and finally diffusing itself all over the trunk. With the headach the intellects are disturbed—and the face, excepting a circumscribed deep red spot on the cheek, is always deadly pale. The eye is frequently red and painful; impatient of light, or watery and glistening—sometimes nearly natural—sometimes white, glossy, and painful.

"In some cases the conjunctiva assumes a bluish cast, and is surcharged with blue vessels, while the cornea is watery and glistening. The eye is frightful to look at, and invariably indicates a malignant disease. The eyebrows are frequently knit or contracted. The lips are generally pale, sometimes the reverse.

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* This is a mistake. The stage of *depression* is just as much a state of fever as the violent *reaction* or excitement which succeeds it. The author should have used "*excitement*" for fever.

The mouth is dry and parched, the breath hot and pungent, resembling a diffused blast from a distant furnace; or clammy, moist, and cool. The tongue is clean for the first six or seven hours, often dry, but it becomes white in general after that period. It is so changed in appearance in some instances, as to induce a person who had not seen the like before, to believe that it had been rubbed over with lunar caustic." P. 125.

There is little thirst in the beginning, or even in the advanced stages, especially in the fatal cases. The skin, in general, is below the natural temperature, dry, and constricted. The feet are frequently cold—the pulse slow and contracted, sometimes irregular—generally averaging from 80 to 90. The stomach is usually irritable—the matter ejected, at first, being of a turbid, watery, or ropy nature—afterward dark, turbid, and black. Vomiting, although a common symptom, is not always present, since cases sometimes terminate fatally without it: but nausea is rarely absent. The patient often complains of weight about the stomach, to which the Spaniards give the name of *fatigas*. The abdomen is tense and painful, especially on pressure; the patient passes black stools which deposite a black and gritty sediment—but are rarely, if ever, feculent, being sometimes watery and copious, sometimes slimy and small, frequently mixed with flaky substances, apparently abrasions from the internal coats of the intestines. The urinary secretion is very irregular, sometimes scanty and high-coloured, often suspended altogether. As the disease advances the pulse frequently disappears at the wrist—the coffee-coloured vomiting then commences—sometimes petechiæ cover the body. The parotid glands enlarge in a few instances—and all these symptoms continuing and increasing, life is destroyed on the fourth or fifth day, sometimes later. No periodical changes were observed during the two first days; but on the third, fifth, or seventh, either febrile heat supervened, or depression took place, speedily followed by death.

It will be evident to most of our readers that the above is a very spirited sketch of the *congestive* fevers long before described by Jackson, and more recently by Dr. Armstrong, in his immortal work on typhus. It would appear that the *cause* of the fever, whether specific contagion, the effluvia from human bodies, or a tainted atmosphere, overwhelms the system, nervous and sanguiferous, and prevents that salutary reaction or free febrile excitement, which is evidently the means by which Nature resists and expels the original morbid impression. The late epidemic cholera of India appears to have a very great affinity to the congestive form of fever described above; the cholera, however, being more violent

in bed, with more than the usual quantity of clothes. If, after he has been in bed for half an hour, reaction takes place, I would then advise the abstraction of a small quantity of blood: but if he continues cold, I would only repeat the bath. Recourse should next be had to emetics; and as the *subsulphas hydrargyri*, or turbith mineral, and ipecacuanha (in the proportion of six grains of the former to five of the latter,) will be found effectually to unload the stomach without much straining, I would recommend it in preference to any other. After the operation of the emetic, calomel and James's powder should be exhibited in the proportions of five grains of the former to three of the latter, in the form of pills, every two hours; with a view of preserving an open state of the skin and bowels, and of affecting the system. The head should be shaved, and blisters applied to the temples and nape of the neck, while the head is kept cool by means of cold applications. The skin should be rubbed over with heated oils when there is much dryness and constriction. The *pediluvium* and fomentations may always be used with advantage. *Opium*, *camphor*, and *ammonia* should be had recourse to, where the prostration of strength is great. The *liquor ammoniæ acetatis*, effervescing draughts, wine, and the mineral acids, may also be tried, according to circumstances; but *emetics* are the remedies upon which our greatest reliance is to be placed. In two forlorn cases I tried a weak solution of the *argentum nitratum* with a view of checking severe hickup, and it certainly answered the purpose for which it was intended: the patients did not recover; but as it stopped the hickup and procured rest, I think it right to mention it as a remedy which may be tried without detriment in such cases." 134.

The work concludes with two appendices on the supposed introduction of yellow fever in the town of Xeres, in the year 1820, which we recommend to the perusal of the importers.

Mr. O'Halloran, with that zeal and courage characteristic of youthful and ardent minds, but which we have seen also in our venerable countryman, Dr. Jackson, has again repaired to the scene of this dreadful scourge, with the hope of elucidating its nature and causes, and ascertaining the best principles of combating its ravages. The labours of our countrymen, who have thus risked their lives and endangered their health, in the service of humanity, should meet with liberal encouragement from a British public, and we trust and hope that every medical society, at least, and many opulent individuals, will consider it a duty owing to science and philanthropy, to place the little works of Drs. Jackson and O'Halloran in their libraries. We think we need hardly add, by way of inducement, that these publications were at the private expense of the authors themselves; and it would be most unjustly cruel in the profession at large, to allow these individuals to suffer in their purses as well as

regard which men have been too apt to pay to great authorities."

The vast importance of the subject of inflammation must be so evident to every physician and surgeon, and it has been so frequently insisted upon, that it would be a waste of time to obtrude any arguments for the purpose of demonstrating that the practitioner, who is not intimately acquainted with every part of it, can neither execute his professional duties with satisfaction to himself, nor advantage to his patient.

Mr. James justly observes, that although Mr. Hunter's work on inflammation has laid an ample and durable foundation for such an edifice of knowledge as may fulfil all the purposes of science in this department; yet, to the superstructure much remains to be added, before it can be considered perfect and complete. The present Essay, however, is not submitted to the profession as a systematic work; it is avowedly much too concise upon many points, to warrant the assumption of such a title.

The inquiry into the subject of inflammation divides itself, according to our author, into various branches. 1st. The state of the vessels and nerves, in the part inflamed, constituting the immediate cause of the phenomena we observe, 2dly. The general laws of the economy, and chiefly the phenomena of sympathy, as they relate to disease in general, and to inflammation in particular; as also the circumstances belonging to, or affecting the individual, which are capable of influencing its progress and results. 3dly. The objects of inflammation in the animal economy, the phenomena which it exhibits, the effects which it produces, and the products which it affords. 4thly. The general principles of treatment, which have been so ably considered by various modern authors, that in the present work this part of the subject is wholly avoided. 5thly. In the words of our author, "a particular arrangement of the different kinds of inflammation, I am justified in saying, is very much wanted, and it has been a principal object of my endeavours in this essay to effect this." It is not contended that there are not arrangements of inflammation in existence, proposed even by authors of celebrity; that those, however, which preceded Mr. Hunter were to him unsatisfactory, may be concluded from his having omitted all mention of them. From the opinion of an author of late date and acknowledged authority also, (Dr. Thompson,) it appears that none have subsequently been offered, which is entitled to command our attention. 6th and lastly. To consider the peculiarities of each inflammation, and to indicate the principles of treatment particu-

larly adapted to it. "In all modern works," says Mr. James, "and for the most part in those of more ancient writers, the views of inflammation which have been given, are, as it appears to me, too general; and this observation also extends to treatment, which has commonly been laid down under certain heads; such as the antiphlogistic plan—bleeding, cold, &c. It seems, however, important to specify exactly the case in which one mode or one remedy is more likely to succeed than another."

From these observations it would appear to us, that our author had consulted *only* those general views, which, in systematic works, properly precede the consideration of the nature of, and the peculiar treatment demanded in, the different species of inflammation. We really are not aware that this important part of the subject has escaped the attention of previous writers.

Mr. James has divided his work into two parts; the first containing "Observations on some of the General Principles of Inflammation;" the second being occupied by a description "Of the different species of Inflammation."

Having thus given an outline of the purposes which it is the author's intention to fulfil, we shall proceed to submit to our readers an abstract of the most prominent parts of his work.

Chap. 1st. "On the Principles on which an Arrangement of Inflammations may be founded." A cursory statement of the modes of dividing or arranging the subject now in use, precedes the exposition of the principles upon which Mr. James has founded his arrangement.

1st. Inflammations are commonly treated of as acute, subacute, or chronic, but these it is observed are merely different stages of the same state in many instances. 2dly. As the adhesive, suppurative, ulcerative, or gangrenous "processes, which cannot be too attentively considered; but they are merely modes of termination, often of different kinds, but sometimes of the same; to a certain extent they will afford a basis of distinction, but to me it seems that this is only in as far as they constitute a groundwork for *subdivisions*, as will be hereafter explained." 3dly. As phlegmonous, erysipelatous, or gangrenous. The following objections to this division of inflammation are submitted:—

"Under these titles, diseases of the most opposite nature, and requiring the most opposite treatment, have been indiscriminately brought together. And supposing no objections occurred to the titles, (a point which will be hereafter considered,) would a division into three kinds be sufficient? Is it not looking at this numerous class of diseases in too narrow a point of view? Are we to

treat them upon principles derived from such a limited consideration? Is not this contenting ourselves with ideas at once too general and too vague?

"A separate division under the title of gangrenous inflammations is hardly to be admitted. For how are we to limit them? Many of the diseases which would be included under the head of phlegmonous and of erysipelatous inflammations, terminate in gangrene; some inevitably, others only incidentally. Are they all to be called gangrenous? Are the classes of phlegmonous and erysipelatous inflammations to be robbed of them at one time and not at another? or how are they to be definitively arranged? The disposition to terminate in gangrene will afford a basis for subdivision, but not for a primary separation." 5.

We are indebted to Dr. Carmichael Smith in this country, and to Pinel and Bichat on the Continent, for another principle of arrangement, which is grounded upon the elementary tissues, in which inflammations occur. These tissues are five in number, and this doctrine supposes, that the inflammation of each is essentially different; that of the first, which is the cellular membrane, including the parenchyma of the various viscera, is considered *phlegmonous;* of the second, *serous*, from the membranes in which it is seated; of the third, *mucous*, it is presumed, for the same reason; of the fourth, which is the skin, *erysipelatous;* and of the fifth, *rheumatic*, belonging to the fibrous membranes.

It cannot be denied, that the nature of inflammation differs materially, when it attacks different elementary tissues; but, when the doctrine is carried to the extent proposed by the above-mentioned writers, it is, in the opinion of our author, and with which we fully concur, demonstrably erroneous. We shall give his arguments in his own words.

"This system," that of C. Smith, Pinel, and Bichat, "is liable to the following objections, fatal if true; namely,

"1*st*. That different kinds of inflammation are liable to occur in the same tissue. 2*d*. That the same kind of inflammation is often met with in different tissues. 3*d*. That the same inflammation shall be transferred from one to another: a position, I must grant, less susceptible of direct proof than the two former; but either are sufficient for my purpose.

1*st*. That different kinds of inflammation are liable to occur in the same tissue.

"In the Skin there are erysipelas, the various exanthemata, and other cutaneous diseases, particularly ecthyma, which approaches to boil: we have those tumours still more analogous, called pinswells, and various other forms, as from blisters, scalds, poisonous substances, chilblains, mechanical injury, &c. which are not erysipelas, and which are not identified, because we choose to call them erysipelatous.

"2*d*. In Cellular Membrane. Besides true phlegmon, we meet with boil, carbuncle, erysipelas, scrofulous abscesses, &c. affections differing widely from each other.

"3*d*. Mucous Membranes, it is admitted, ulcerate in one part, effuse lymph in another, and secrete pus in a third; they are the subjects of catarrh, dysentery, angina, croup, of *various forms* of inflammation of the bronchia and intestinal canal, described by Badham, Hastings, Abercrombie, and others.

"4*th*. Serous Membranes are liable to inflammation of sthenic and asthenic type, if not to rheumatism; it is not always the *same*. There is, I conceive, no distinct *serous* inflammation, as has been maintained.

"5*th*. In Fibrous Structure we have rheumatism, gout, syphilis.

"Enough, I think, has been stated: the question lies in a narrow compass:—the tissues are five; are there more than five species of inflammation or not? If there are, one tissue must be liable to more than one, and of course there is an end of the doctrine. As far as it properly goes, the theory is valuable, but it has, I conceive, been pushed beyond proper limits." 7.

"2*dly*. That the same kind of inflammation is often met with in different tissues; the skin, mucous membranes, glands, periosteum, bone, &c. are liable to inflammation from syphilis; almost every structure in the body from scrofula; the urethra and bladder, if not the bowels, are sometimes affected by rheumatism. The inflammation in the diathesis of measles, smallpox, erysipelas, &c. may fix upon serous or mucous membranes, as well as skin, and often, if not generally, does so.

"3*d*. They are often transferred from one tissue to another.

"It is maintained, that when this happens, the new inflammation is different from the other. Upon this head we may observe, that proof cannot be obtained, because the organ so affected is generally internal; or if not, its structure is so different, that inevitably the form must vary. Thus, if inflammation is transferred from the urethra to the testis, it is not gonorrhœa there; nor, if the reverse happens, is it hernia humoralis;—so, if erysipelas receding affects the brain, it may not actually be erysipelas, whose characters have been defined from its appearances in a different organ. But the inflammation, I conceive, is as analogous in its nature to it, as circumstances will permit, and differs in its nature from inflammation of the *same* organ arising from other causes. If inflammation recedes from an external organ, and attacks one internal, there doubtless will be a material change in the *constitutional sympathies*, and a proportional alteration in the *treatment* will be required; but *this* may be explained from the greater importance of the part. If the doctrine alluded to were true, then it would be sufficient, that any given tissue were inflamed, for its nature to be the same: a position so irreconcileable with facts, that its advocates admit that the cause may modify it; if it does so, this modification may be so material, as to throw the influence of the texture into the back ground,—and for this I contend." 9.

The objections maintained by our author, against this doctrine, are supported by the opinion of Mr. Hunter, who says, (vol. I. p. 473)

"It has been supposed, that the different species or varieties of inflammation arise from the difference in the nature of the part inflamed, but this is certainly not the case, for if it was, we should soon be made acquainted with all the different inflammations in the same person, at the same time, and even in the same wound. For instance, in an amputation of a leg, where we cut through the skin, cellular membrane, muscle, tendon, periosteum, bone and marrow, the skin should give us the inflammation of its kind, the cellular membrane, of its kind, the muscles of theirs, the periosteum, bone, marrow, &c. of theirs; but we find, it is the same inflammation in them all."*

After taking a rapid survey of Mr. Hunter's divisions of, and observations upon, inflammation, which, we trust, are too deeply impressed upon the minds of our readers to require any particular notice from us, Mr. James proceeds to an explanation of the principles upon which the arrangement he proposes is founded. Upon this part of the subject, our author may claim the merit of originality, at least, and we think there are few who will not agree with us, that he has evinced also much ingenuity in his mode of treating it. We shall submit to our readers a copious extract from this part of the work.

"The arrangement of inflammations here proposed is founded upon the following facts:

"1st. That the mode of repairing injury, and of arresting the progress of inflammatory diseases, depends upon the power which the animal economy possesses of effusing organizable lymph. If this exists in any given case, in a sufficient degree, the progress of the inflammation will be *limited*; if the contrary it will *spread*.

"And the danger of the disease being in proportion to the disposition to spread *cæteris paribus*, more constitutional sympathy, denominated sympathetic fever, will be excited.

"And this sympathetic fever, however salutary in its nature, will, when it exceeds certain bounds, tend to augment rather than lessen the mischief.

"The disposition to spread may be owing either to the nature of the part, as a surface; of the cause, as a poison; or to the state of the constitution;—but the former are circumstances more or less *accidental*, and though very important, cannot afford a basis of dis-

* Mr. James quotes Mr. Hunter "from the edition in 8vo. by Mr. Travers." We find that it is the last 8vo. edition, published by Cox, to which he refers. Mr. Travers has not, we believe, edited any of Mr. Hunter's works.

tinction: but the latter, as a *permanent* cause, certainly will, and, when it is similar in nature and degree, and accompanied with the same concomitants, it will be found to produce the same effects: and there is no inflammation in which the disposition of the constitution does not tend either to produce its limitation or the reverse. These concomitants are very various, as we shall hereafter have occasion to specify.

"The disposition then to *limit*, or to *spread*, will afford the groundwork, by constituting two great classes of inflammation. It may be said, perhaps, that it would be as well to designate them by the old titles sthenic or asthenic, or by the terms phlegmonous and erysipelatous. It is not, however, difficult to show that either of these are (is) liable to strong objections.

"The terms sthenic and asthenic might probably be employed with reference to internal inflammations without any obvious disadvantage: but a system, to be tolerably perfect, should apply generally. Now, if we were to extend these designations to external inflammations, we should often find ourselves involved in difficulties which, in their consequences, amount to more than technical errors; for example, in classing erysipelas, can it be considered as an inflammation of the sthenic type? Is it not generally the reverse? —Can we class it as asthenic?—Would not this lead to a very erroneous consideration of the purer kinds of erysipelas phlegmonodes?

"The objection to this mode by no means rests on the support of this example only, but many others might be adduced. Now, by taking the disposition to limit or to spread, as the leading mark of distinction, we do not imply the necessity of *treating* them sthenically or asthenically; we merely recognise a prominent character, which ought to have a material influence over our conduct, and in the case of external inflammation I should strongly contend for the utility of doing so.

"The objections to employing the terms *phlegmonous* and *erysipelatous* are not less weighty. As phlegmon and erysipelas, are names now given to definite forms of disease, we naturally connect the idea communicated by the adjective phlegmonous with the disease which we entitle phlegmon, and so of erysipelatous. Now if we were to conclude all the inflammations, whose disposition it is to be limited, under the former designation, we should ally with phlegmon those which are exceedingly dissimilar in nature, as for instance, mumps and carbuncle; and in the same way, if we called all those inflammations erysipelatous, whose disposition it is to spread, we should confound with erysipelas a variety of affections of the skin, of the vascular system, &c.; we should have even paronychia gravis, whose seat is essentially *beneath* the skin, while erysipelas is more particularly resident in it. These and other examples are, I conceive, sufficiently strong to prove that such terms as these are liable to the very weighty objection of confounding together diseases essentially different in nature, while by the mode now suggested, this is, as far as I can see, entirely avoided.

"*Secondly.* THE DEGREE OF CONNEXION OF THE ORGAN WITH THE VITAL FUNCTIONS OF THE ANIMAL, is another cause which exerts a predominant influence over the character of the inflammation; acts invariably, and *cæteris paribus*, in the same degree; the constitutional sympathy being in proportion to the danger, the difficulty of resisting that danger, and of repairing the mischief done. On this principle I would form the Orders.

"*Thirdly.* There is a circumstance in the history of inflammations which has hardly received a *due* share of attention, but is both sufficiently remarkable, and very important; namely, the original disposition to terminate in one mode rather than another: thus, in boil and whitlow, it is to suppurate; in carbuncle to slough; and in mumps to resolve; and this disposition is so strong, that it is very difficult to procure any other termination. It may happen, however, that there shall be more than one mode in which it is disposed to terminate; as in either resolution or suppuration in sphacelus or ulceration, and so on. On this principle I have grounded the establishment of the Genera: whether it will fulfil the expectations of a strict classification is more than I can pretend to answer for; but of the practical importance of the principle I feel little doubt, or of its not having hitherto been carried to the extent it will admit." 17.

We must refer to the "Nosological Table of Inflammations," which is added to the work for the classification of the orders, genera, and species, admitted in the proposed arrangement.

The difficulties with which an author has to contend, who enters upon the task of forming a classification of so proteiform a state as inflammation, are so manifold, that we should be inclined to view, with peculiar indulgence, a less successful "attempt" than that which is submitted to the profession by Mr. James. The division of inflammation into two classes, founded upon its disposition to limit, or to spread, and the principles which guide our author in the formation of the orders, appear to us an improvement upon the previous arrangements of this subject. We cannot, however, but disapprove of the arbitrary separation of diseases of the *same name* and *situation*, merely because they occasionally differ in their degrees of violence. It is not likely that such distinctions "will practically be attended with any inconvenience," inasmuch as the practitioner is rarely influenced in his treatment by the systematic arrangement of a disease; but if generally applied—if the several varieties of the same disease are to be thrown into different genera and classes, that perspicuity which should form the principal feature in every system of nosological arrangement, would be utterly destroyed. It is true that Mr. James does not carry the innovation of which we complain to any extent; as a precedent,

however, it is dangerous, and to us the grounds appear insufficient, upon which he attempts to prove the propriety of deviating from every other classification on the subject by the separation of the different kinds of PARONCHIA and FURUNCULUS.

Upon the whole, we are of opinion, that if the arrangement of Mr. James be considered with reference to those we previously possessed, the errors of which he has pointed out, its value, in our present state of knowledge at least, will be acknowledged and duly appreciated by his professional brethren. We do not venture to determine that it is unexceptionable; that it is comparatively so, is highly creditable to the talent of our author, when we consider the abilities of those who have devoted their attention to the attainment of the same object.

In Section I, chap. ii. a very brief sketch of the local symptoms of inflammation is given. The author is conscious that the account of the phenomena of inflammation is very incomplete. We learn from the preface, however, that it is not his intention "to encumber his work with details, which are already before the public, by the labours of far abler hands."

In the second section of the same chapter "the supposed final causes of inflammation" are considered.

"That the vessels," observes our author, "are materially, and indeed, principally, implicated in producing it, must be granted; and also, that we are not very likely to arrive at any very precise notions of their state and functions in inflammation, unless we are acquainted with them in health, which is so far from being the case, that there is, perhaps, no point in physiology more involved in obscurity. This being so, doubts may arise whether it would not be the most prudent plan to avoid the discussion altogether; and this opinion will receive further strength from the mortifying fact, that although men of the most exalted abilities and enduring patience have been engaged in the inquiry, it can hardly be considered to have led to any useful result." 23.

Under these circumstances Mr. James would "feel inclined to sit down without further investigation," did it not appear to him, that the doctrines which are now with much ingenuity maintained, and which are founded upon much research, seem to lead in their *practical application* to inferences, which are at variance with what he conceives to be the right treatment of the majority of inflammations, for he remarks:

"If it is granted that it depends upon debility of vessels, by consequence it would follow, that it should be our endeavour to counteract this debility."

The author is aware that neither Dr. Philip nor Dr. Hastings departs from the well-known principles of treatment in inflammation, which practice has established, but he fears that their doctrines will induce *others* to do so. Now we really perceive no reasonable cause for alarm upon this point; it requires but a very superficial consideration of the doctrines promulgated by the supporters of the debility of the capillary vessels, to be convinced of the impropriety of having recourse to a mode of treatment "at variance with that generally supposed to be required in the majority of inflammations."

In opposition to the authors whose names we have just mentioned Mr. James is inclined to consider that the phenomena of Inflammation are the result of *increased action*. He then takes a cursory view of those facts which seem to militate against the doctrine of debility.

It may be inferred, he thinks, from many circumstances, that the heart is not *essential* to the circulation; at least for a time it may be carried on without, though imperfectly; and it may be presumed that it does not *alone* support it in the human animal, under ordinary circumstances.

"Since, then, some other power is to be found to do this, the question is, where does that reside? It is maintained that the arteries contract to propel the blood; but if so, either they must contract together, or at different times; if together, they must either do so at the *same* time as the heart, or *alternately* with it; if at the same time, this would prevent the blood from flowing into them at all; if alternately, that would maintain the pulsatory action in the veins, whereas this is of rare occurrence. There is another mode in which they may be supposed to contract, namely, in succession, like an intestine; but as far as I have ever been able to find, both the dilatation by the impulse of the heart, and the contraction by the *consequent* exertion of the *elasticity* of the artery, are in immediate succession, and occur at the same moment, at any distance from the centre, which is at variance with this supposition; and as the elasticity of the arteries diminishes, so as to be almost imperceptible in the smaller branches, in them the pulsatory motion is gradually lost; whereas, if the contractile power operated, it would be continued, nay, increased, as *their* contractile powers are stronger, than in the larger vessels. Hence, as well as for many other reasons too long to specify here, I should be led to believe that the circulation is not maintained in any degree by the muscular contraction of the arteries; and I also believe that their power of contraction is given them for another purpose quite sufficient in importance, namely, to *regulate* the quantity of blood conveyed through them to any part, or to the whole.

"It is unnecessary for me here to detail the reasons which induce the belief that a power of propulsion resides in the capillaries; but

as the opinions which have been formed respecting the state of the vessels in inflammation have originated in some considerable degree from the notions which have been entertained respecting this power in the *arteries* also, it was necessary that I should express my dissent in this particular." 37.

It is observed that the theory of debility, and diminished circulation in the vessels belonging to inflamed parts, as maintained by Vacca, Lubbock, and Allan, rests chiefly on the hypothesis, that the arteries propel blood; and before it can be admitted, it is necessary that this power of propulsion in the arteries should be proved.

"It is not sufficient that an artery will contract—that it will contract under the application of a stimulus; it should be *proved that, under ordinary circumstances, it does propel the blood.*"

In answer to the experiments stated by Dr. W. Philip and Dr. Hastings, it is once more contended by our author, that microscopical observations are liable to mistrust, and that analogies between the higher and lower orders of animals, the chief subject of their experiments, cannot be deemed conclusive. It is granted that *dilatation* of vessels is a necessary part of the process of inflammation, but—

"I do not contend," says Mr. James, "that *this dilatation is not essentially connected with debility*: it might as well be argued that the uterus dilates from debility to contain the fœtus, or the rectum to allow passage to the fæces. No doubt, in both these cases the cavities permit themselves to be distended; but having by a temporary suspension of their action, or from the impression of a predominant force, suffered an alteration of their calibre, they immediately resume their usual degree of action on their contents, or probably act on them with more power than before. This may be equally the case with vessels enlarged from inflammation, or in another less exceptionable instance, *i. e.* when the branches of a tied trunk enlarge.

"So obviously incapable is the doctrine of debility of explaining the opposite states of inflammation *i. e.* common or acute, and passive or weak, that its supporters have recourse to the *supposition* of the larger arteries possessing in the former an increased degree of action, but not in the latter; but that the capilaries are in a state of debility in both. Now, of course, if the propelling powers of the arteries are not proved, this must be doubted; and if disproved, fall to the ground." 32.

We must remark, in answer to the latter part of the passage just noticed, that the increased action of the larger arteries during inflammation is *not* a matter of supposition, nor does it rest upon the doubtful authority of microscopical observation; the increased pulsation of the large arteries may be seen without difficulty, when inflammation is seated

externally, and is, we presume, a sufficient proof of their increased action.*

After having premised those arguments which oppose the doctrine of debility, the author proceeds to state *facts*, most of which, however, have been enforced by other writers upon this subject, which appear to him to support the contrary opinion. When we take into consideration the result of the various experiments, and the nature of the conflicting hypotheses, that have been instituted for the purpose of determining the state of the blood vessels in inflammation, we are inclined to consider, in opposition to our author, that the doctrine of the debility of the capillaries *taken in all its parts*, is less liable to objections, than that which supports the idea of their increased action. Our limits prevent us from entering fully into the subject; we cannot, however, refrain from observing, that Mr. James, who admits the *dilatation* of the vessels of an inflamed part; who admits also that they contain an *increased quantity of blood*, but who nevertheless believes that their action is *increased*, has not satisfactorily to us, at least, replied to the forcible argument of Dr. W. Philip, who observes, "When we speak of a morbidly increased action of vessels, do we allude to the state of their muscular coat? As this possesses transverse fibres, the effect of unusual contraction must be an unusual diminution of their area. Do we mean by morbidly increased action an increase of elasticity? the consequence of this can only be a greater tendency in the vessel to preserve its mean area."

Let us not, however, be ashamed to confess, that upon this subject our knowledge is at present extremely limited; no theory has yet been promulgated which has not its vulnerable points, and until we arrive at a more perfect acquaintance with the *functions* of the *nervous* system—until we have the means of ascertaining the precise influence excited by the nervous over the vascular system, we must not hope to gain an accurate knowledge of the *nature* of inflammation. To determine by abstract experiments or otherwise, the state of the sanguiferous system, is doing little or nothing towards an elucidation of this interesting but intricate subject.

The 1st Section of Chapter 3, "On Sympathy," does not claim particular notice; it consists chiefly of a brief sketch of facts, which are as well known as they are indisputable. Sympathy is considered only as connected with disease. Mr. Hunter also treated of it in this point of view alone. He treated of universal and partial sympathy; of the continu-

* In this opinion the Editor does not coincide with the Reviewer.

ous, contiguous, and remote; of similar and dissimilar. Mr. James conceives it would be more simple and satisfactory to consider it under three heads: 1st. As "Sympathy of immediate Connexion." 2d. "General Sympathy." 3d. "Sympathy of Function." The influence of sympathy in producing the processes of inflammation, such as the effusion of organizable lymph, and the conversion of this into animal structure, is remarked. It is observed also that the most simple instance which presents itself of the connexion of inflammation with sympathy, is to be found in cases of injury. The phenomena which occur locally are termed inflammation: those which take place generally constitute sympathetic fever. When the sympathetic actions of the part and of the constitution do not exceed a due degree, they are not only not injurious, but useful and necessary: but supposing they do exceed that degree which is so, what will be the consequence?

"That much more blood will be brought to the part than it can dispose of, and with an undue degree of force, both which circumstances disturb the action of the minute vessels, and they cannot perform their task. But the efforts of the constitution are in proportion to the necessity for repairing the mischief and the difficulty in doing so; the struggle, therefore, on the part of the system, increases, as the mischief itself increases, from the very efforts made to remedy it, and disorganization, as it is termed, ensues, i. e. the vessels are so overstrained by the influx of blood, so disabled by over-exertion, compressed by surrounding effusion, or, perhaps, actually ruptured, that they are disqualified for their proper offices, while fresh efforts are still made to obtain the object. Although, however, this cannot be directly accomplished, the vessels are, nevertheless, gifted with the power of effecting this indirectly in a great number of instances, by the formation of granulations to which the secretion of pus is accessary; if, however, the repair has been obstructed by such over-action as now stated, that pus will be of an unhealthy nature; and if this end cannot be attained, the last resource of nature to terminate the struggle between the part and constitution, is, to remove it either by ulceration or mortification." 43.

That the degree and kind of actions sympathetically excited are much influenced by the nature of the injury, state of the constitution, and nature and state of the part, does not admit of doubt. Our author therefore touches briefly upon this part of the subject, and proceeds to notice the consequences which arise from continuity of surface, and contiguity of situation of inflamed parts. He conceives it unnecessary to dwell upon the nature of "Sympathy of Function, or Remote Sympathy." "General Sympathy," he observes, results from an affection of those systems which,

by the extent and importance of their sympathies, are affected by every injury, and influence every function and process.

Sect. II. "*On the Accordance of the General and Local Affection,*" contains some interesting observations (for which we must refer our readers to the work itself) upon the probability that the affection of the system generally accords with that of the part in *kind*, if not in *degree*. Mr. Hunter was of a different opinion.

Dr. Thompson, in his "Lectures on Inflammation," p. 90, appositely observes, "No sooner do any of the subordinate parts of the animal economy receive an injury, or become affected with disease, than changes are induced in the general system, corresponding in some degree to the natural seat and extent of the local affection."

Chap. IV. "*On the State of the Digestive Organs,*" as connected with inflammation. Mr. James considers it superfluous to enter into details upon this highly important subject: he refers his readers, with laudable deference, to the works of Mr. Abernethy, observing, however, that—

"An impure state of the blood exists, perhaps, more frequently than we are aware of; but, as it is invariably connected with disorder of the digestive organs, the effects which partly arise from both causes, are often exclusively attributed to one. But when I see persons in whom every scratch festers into a sore, as in scurvy or scrofula;—when I observe that the atmosphere alone will change the disposition of every action;—that poisons introduced, and acting upon the circulating medium, will induce the most powerful effects upon the whole system; I must profess myself to be a humoralist in a considerable degree, (although quite ready to recognise the direct, as well as the indirect, influence of the digestive organs and nervous system on disease,) a doctrine which Mr. Abernethy has himself most perspicuously enforced, with reference to many; for, although he prefers the general explanation of the phenomena of disease, by sympathy, yet he does by no means exclude the influence of a depraved state of the blood.

"If experimental research often instructs, I believe also it frequently deceives us, because we too hastily form deductions from what *we* deem *conclusive* experiments. Now, the opposition to the humoral pathology has chiefly been grounded on the fact, that we cannot discover such an alteration in the circulating fluids as would seem to us to justify the supposition that it exists. When, however, we see the efforts and the expedition with which the animal economy rids itself of *some* foreign matters, which we can recognise by their specific effects, as ipecacuanha or jalap introduced into the veins, or by their sensible qualities, as mercury, nitre, asparagus, turpen-

tine, garlic, &c. introduced any how, we must be strongly prejudiced, not to believe that those matters have been contained in the blood—even although in the blood we cannot perceive them. But do not the vital powers quell and suspend the chymical properties of most substances?—Do they not convert the most dissimilar matters into an apparently similar substance?—May they not prevent these, and others, from manifesting their specific qualities, which, nevertheless, though modified, are not completely subdued, and may still excite great disturbance in the constitution?—And if so, may not these powers, with reason, be supposed to prevent the *sensible* alterations in the qualities of the blood, in such diseases as scurvy, scrofula, gout, lues, mercurial disease?—And if we are compelled to admit such alterations in these, may we not be called upon to allow that it possibly exits in a greater or less degree in many others? The abuse of the humoral pathology has led to infinite mischief; but if we are content to recognise the truth of the doctrine, as far as facts seem to establish it, without, however, grounding any theory or practice on that which we only imperfectly understand, no harm can arise from our belief. We can never err while we consider experience paramount." 59.

At page 62 the partiality of our author for the doctrines of the humoral pathology, is carried still farther, for he says,

"If it be demanded, upon what system the air chiefly acts? I should again say, on the blood; for, if we take a man in previous good health, and place him in a hospital, for an injury not very severe, at a time when the cases there are doing badly, and find that, without any cause which can particularly affect his alimentary or nervous system, a bad kind of inflammation is set up, is it an unreasonable conjecture that the blood which, in the lungs, is particularly exposed to the contact of this air, should be thereby rendered impure? If we find that he does much worse when lying on the floor of the ward than if raised two or three feet above it, knowing that it is more deteriorated at the bottom than any where else, will not this opinion receive strength? And if, on sending him into a pure air, he does well, will not this add confirmation? It must be understood, however, that, although blood rendered impure by this, or any cause, is likely to afford but a bad material for the processes going on in an inflamed part, yet that its operation on the nervous system, generally, and through this on the alimentary, is, perhaps, equally, if not more, injurious." 62.

The remaining pages of this chapter are occupied by a very brief consideration of "the state of the nervous system." The question as to the good or ill effects of weakness or strength, with reference to inflammation, is also touched upon.

"If strength is to be considered advantageous, inasmuch as it is the result of health; weakness is only to be feared when it arises from unsoundness of constitution. We need not be afraid of strength:

because we have it in our power to reduce it. We need not seek to obviate weakness when it is merely the natural result of disease. If, for instance, we are to perform an operation rendered necessary by injury, although the patient may be rendered weak by the previous processes, we do not on that account think it desirable to give him tonics or cordials to prepare him for it. It seems to me to be of consequence to establish the point, that when weakness exists simply without disorder, it will not lead to any mischievous consequences; and that strength, in as far as it is the offspring of sound health, is advantageous." p. 68.

We shall not dwell upon *Chap.* V. "*On the Purposes and Uses of the different Modes of Inflammation.*"

Mr. James is contented with giving a very short statement of the objects which nature has in view, in the processes of inflammation. Dr. Thompson's and Mr. Wilson's "lectures" are referred to as excellent epitomes of the knowledge we owe to Mr. Hunter, upon this subject, and of that which has since been added by the labours of subsequent investigators and themselves.

Chap. VI. "*On Mortification.*" The principal objects of the author in this chapter, are to point out the advantages which would result in a practical point of view, from a more particular arrangement of the different kinds of mortification than has hitherto been adopted, and to show that this subject has hitherto been considered in too general a manner. Mr. James, we find, is not singular in his opinions upon this point. Dr. Thompson remarks, that "the various modes in which parts die, the diversity of causes from which their death proceeds, and the dissimilar or even opposite modes of treatment, which those affections in different stages and in different circumstances require, render a careful investigation, and an accurate arrangement of the subject, most important objects in the practice of surgery." The opinions of a recent French author, (M. Hebuardi,) in the "*Dict. des Sciences Med.*" *art. Gangrene*, are also in unison with those of Dr. Thompson and Mr. James upon this subject. The definition of the term mortification does not differ substantially from that of other writers.

"Mortification appears to be a peculiar alteration induced in the body, in which the fluids are coagulated, more or less perfectly, the solids changed in their texture, and the functions of the nerves and blood-vessels completely abolished; in short, a part so circumstanced is dead; but this is not simple death, from which the body, or a part, may, under some circumstances, be recovered; but it is an irreparable destruction of the organization and powers.

"Gangrene most commonly precedes this state, and, indeed, it may be doubted whether it does not in every case. But gangrene

"Our author will include all he has to say under the head of acute or chronic gangrene, and their treatment; another, under the head of remedies, such as blood-letting, cold, heat, or the antiphlogistic plan generally, and so on. I would not be understood to object to this proceeding, but to advance the opinion that the work is left imperfect, unless after the general scheme has been made out, the particular parts are distinguished. If, therefore, I were to attempt to write on this subject, it would be with the design of treating individually of mortification as produced by the application of certain causes, or as the result of certain inflammations; and in the present sketch it will be my object to do so as far as I well can." P. 93.

The propriety of dividing the fever which attends gangrene or mortification into three, or, at most, four kinds, is, in the opinion of Mr. James, very questionable. The difficulty of disturbing ideas once established is acknowledged, and it is presumed, that to multiply fevers by the number of different inflammations would probably never be tolerated.

"But let us get rid of the term fever, and state the fact in plain words, and it may perhaps be admitted that the constitutional sympathy varies as the local affection." 95.

Cases have fallen under our observation which would induce us to form a different opinion from that contained in the following passage—"when the state of gangrene is fully established, the character of the constitutional affection will be nearly the same, however different the cause may *be*." *(have been.)* We have seen well marked and important differences of constitutional affection, notwithstanding gangrene was fully established. The fact may be, as stated by Mr. James; in most instances, exceptions from it, however, are, we apprehend, not uncommon.

The chapter concludes with a brief enumeration of the causes which are capable of influencing or accelerating the progress of mortification, many of which may be avoided by attention, or counteracted by proper means.

We now arrive at "*Part Second*," "*On the different Kinds of Inflammation*," in which are offered "a few brief observations on the general principles which may be applied to the various leading divisions of inflammatory diseases, and on the particular nature of some of the individual species. They may first be divided into those which are produced by external causes; 2dly, those which arise from a disordered state of the constitution itself." It is almost unnecessary to observe, that the arrangement proposed by the author, is adopted in his consideration of the different kinds of inflammation.

brief observations follow upon the mechanical injuries of bones, and the different effects resulting from incisions, contusions, or lacerations. The principles of treatment laid down, although concise, are well worth attention.

In conformity with the plan of this Essay, Mr. James passes rapidly over the subject of "*Inflammation from Excess or Diminution of Temperature*," "*Inflammation from Poisons*," "*Inflammation of Vital Organs*," "*The Causes which produce Inflammation in Vital Organs*," "*Inflammation of Joints*," &c. &c. He conceives that the general principles of Inflammation which it has been his endeavour to support, will find some confirmation in the phenomena exhibited in "*Inflammation of the Eye*," upon which subject he remarks that—

"In the first place, it is perfectly well known that when ulceration, abscess, or sphacelus, are spreading in the cornea, still more in the globe, the constitutional sympathy is far greater than when the mischief is arrested by the effusion of organizable lymph, and that if this can be procured by the use of arg. nitrat. remarkable relief is obtained with respect to the general symptoms, while on the other hand those remedies which will correct, subdue, or change, the state of the system, will influence the progress of the disease in a manner no less remarkable; and as these are processes which we can actually observe and watch, as much as if they were experiments contrived in the most delicate manner, they possess particular value. In the second place, this sympathy is much less when the conjunctiva, or integument, of the eye is alone concerned, than when the more essential parts are so, and there is risk of disorganization. And, in the third place, it may be noticed that each kind of inflammation of the eye has its own peculiar disposition to terminate in one mode or another:—in some this is effusion of puriform mucus; in others, in vesicle and ulceration; in others, in adhesion or abscess; in others, in sphacelus; in others again, to persist merely as inflammation." P. 163.

The subject of "*Inflammation of the Testis*," is dismissed with a few very brief observations; we notice it merely for the purpose of expressing our regret that a very efficient method of drawing blood from the part affected, by opening the enlarged scrotal veins with a lancet, is not more frequently had recourse to. It is not mentioned by our author, and we believe, indeed, that the practice is seldom adopted. In several cases of inflamed testicles we have drawn blood in this manner with much advantage. A greater quantity may, in some cases, be thus taken, with less trouble to the patient and practitioner than by the application of many leeches, independent of which, it is advantageous in an economical point of view, particularly in hospital practice. We should

observe, that it occasionally happens, even when the part is much swoln, that there are no veins sufficiently apparent to allow of the abstraction of blood in the way we have just mentioned. We transcribe the following judicious observations upon "Inflammation affecting common or external parts."

"It is one principal object of this essay to ground the plan of treatment on the peculiar disposition of the inflammation we have to manage, and one of the most important features in this is, its tendency to one mode of termination rather than another.

"'A criterion,' says Dr. Kirkland, (vol. i. p. 317,) 'ought to have been fixed, when to attempt discussion, and when to let it alone.' I believe no better can be found than the natural disposition of the inflammation itself; for, if that is decidedly to suppuration, no attempt, probably, to resolve it will be successful, or, if so, advantageous, with a very few exceptions; for such a disposition is generally calculated to relieve the constitution.

"When the disposition admits either of resolution or suppuration, then of course the former is to be preferred, but the means of accomplishing this object are by no means the same in all cases; thus, where there is but little tendency to suppuration, we may employ warm applications without reserve; whereas, if there is much, they must often be avoided; while, on the other hand, they are particularly proper where there is *no* disposition to resolve. There is an avowed difference of opinion with respect to the superiority of warm or cold applications, and some surgeons are almost exclusively addicted to the use of the one or the other; but where there is not such a prejudice existing, it has been confessed that the preference of the one or the other is very often founded rather on empirical than on rational motives. If the principles above stated are true, they may contribute to guide our judgment in this important matter." P. 170.

Some excellent practical observations are made upon the subject of "*Carbunculous Inflammation.*" The peculiar characteristic of inflammations of this genus, is their strong and almost irresistible disposition to terminate in the sloughing process more or less; and in the pus produced, being of the worst description and most irritating quality. They occur from the immediate effects of some local injurious cause; in most instances, in persons who have lived freely, grossly, and irregularly, and whose digestive organs are much disordered and loaded.

"The pyrexia, or degree of vascular reaction, will greatly depend upon the remaining powers of the constitution, and as the subjects are often people of originally strong stamina, it is often very considerable; but there is an invariable and strong tendency in all cases to sinking of the nervous powers, which, when sloughs are formed, often takes place very suddenly, and to a great degree. A hurried and

anxious and depressed state of the nervous system are manifested by the tremours, the tendency to low delirium, and the hurried and anxious countenance. The disordered state of the digestive organs is evinced by the furred and bilious tongue, the nausea, headach, and foul discharges.

"The object of medical treatment is to unload the bowels, which generally contain a large quantity of collected fæces, and at the same time procure secretions from the liver; a dose of calomel, followed by a mixture containing the sulphate of magnesia or tartrate of potash, senna in infusion and tincture, and jalap, with a little tartrite of antimony, if the nausea does not forbid it, perhaps afford the best mode of acting upon the bowels with these views; and, indeed, if there is any reason to believe that the stomach is loaded, an emetic is very useful. In the subsequent stages, blue pill, followed by rhubarb and senna, and tartrate of potash, form the best laxative, as I believe. The employment of purgative medicines suited to the case is by no means a light matter; in many instances it forms by far the most important part of the treatment, and if, by injudicious conduct, we leave accumulated fæces in the bowels, or fail to excite the secretions from the liver, or if we irritate them too much, and more particularly, if we bring on purging of watery stools, we shall do much harm where we might do much good. The compound extract of colocynth with calomel is often a good medicine in the beginning." P. 181.

In such cases the patient must be supported according to his want of power; if we can keep him up till the sloughs form and separate, he will do well.

"*According, therefore, to the necessity*, it will be our duty to supply him with such articles of drink or food as may to us appear most advantageous, and in the advanced stages it often becomes necessary to push this plan pretty far; and indeed in all instances it is important to remember, that as these inflammations *are of the limited kind*, there will be less danger in exciting the vascular system than if they were otherwise.

"But it is of still more consequence to employ suitable local treatment, for upon this the life or death of the patient will generally depend. It is rarely possible to prevent these abscesses from going into suppuration, and therefore it should be our object to promote the process by warm fomentations, and poultices, which in some cases it is serviceable to make with stimulating fluids; for this kind of inflammation is attended with great want of nervous energy in the part, and for this reason, evaporating lotions or poultices would be highly improper." 182.

It is not only the character of such inflammations to form sloughs, but pus of the worst description; healthy pus simply excites a disposition in the part, to discharge it as a foreign body; but unhealthy, produces excessive irritation, and acts like a poison lowering its powers. There is a strong exertion

phlegmonoid form of local affection. Mr. James does not attempt to reconcile objections to terms, which he looks upon as insuperable, but observes,

"I have taken the liberty of so adapting those we have, as to avoid any very palpable error as I hope; and have divided the E. phlegmonodes into two kinds, the more purely inflammatory, to which I have added the epithet verum, and the bilious; and to the latter have appended a variety which to me appears sufficiently well marked, in which the absorbents are inflamed, under the title of E. phlegmonodes biliosum complicated with inflammation of the absorbents. The E. œdematodes will constitute another subgenus, of which one principal species will be the E. gangrenosum of authors, which is the bilious erysipelas occurring in shattered constitutions." P. 239.

Having made such alterations in the titles, it necessarily follows, that the descriptions offered "*mutato nomine*," do not exactly accord with those which have heretofore been given under them.

The *treatment of erysipelas* recommended, is highly judicious; it does not materially differ from that which is enforced by the best practical authorities of the day. A very perspicuous, yet concise, account of the "Erysipelas Phlegmonodes Biliosum," combined with inflamed absorbents, is given. We are indebted to Mr. Copland Hutchison for the only particular account of this variety of the disease, which has yet been published. Mr. James does not appear to be very sanguine in his expectations of success, from the free use of incisions, which Mr. C. Hutchison has recommended; he remarks, that those cases which he has treated in this way, have not derived all the advantage from it, which he had been led to expect; but on the other hand, the tendency of the wounds to run into mortification, *was not so great* as might, by some, have been apprehended. The pain and irritation which almost invariably accompany cases of this nature, are to be relieved by the free use of opium, the effect of which may be greatly assisted, by applying cold cloths to the forehead and head, which, without preventing its sedative influence, obviates its injurious impression, and often converts a forced sleep into a calm repose. The remaining pages of the work are occupied by a brief, yet correct description of "*Paronychia Gravis*" of "Inflammations tending to Phagedœna," and those which tend to mortification.

From the attentive perusal we have bestowed upon Mr. James's Essay, we are inclined to form a favourable opinion of his talents; he possesses the merit of supporting his own doctrines with much ingenuity, and is entitled to our commendation, for having honestly forborne to commit a literary

each side of the gunwale of a boat, in May, 1813, by which accident the urethra was so injured in the perineum, that he was forced to have the catheter introduced for six weeks. From that time he continued to experience more or less difficulty in discharging his urine; and in May, 1819, he was attacked with a sudden ischuria, which was soon followed by an extensive effusion into the cellular substance. Mortification took place, and the integuments in the perineum, with about an inch of the canal of the urethra, sloughed away. A free vent being thus obtained, the mischief did not extend itself to the scrotum. Several unsuccessful attempts, by the gentleman in attendance, were made during the healing process, to unite the integuments over the catheter. In the month of August following, the patient came under the care of our author in St. Bartholomew's hospital, with a large smooth cicatrix occupying the urethra, no vestige of which remained at that part. The mucous membrane of the canal was distinctly visible, terminating above, and recommencing below the cicatrix. Through the posterior aperture the whole of the urinal and seminal discharges were evacuated, the canal anterior to the breach being increased in density, contracted, and likely soon to be obliterated. Our author determined on pursuing the following plan. The integuments on the right side had suffered less than those on the left, so that when a catheter was introduced, that portion which passed across the cicatrix could be about half covered by drawing the skin and cicatrix from the right towards the opposite side. Our author's first attempt was to encourage this disposition in the integuments to fold over; and, as some delay was required to dilate the anterior part of the urethra with bougies, he was directed to remain in bed with his knees tied together over a pillow, and a truss was so applied as constantly to press the integuments from the right to the left side.

"After some weeks the urethra being sufficiently dilated to admit a moderate sized catheter, I determined to attempt the following operation. The smooth cicactrized surface having become insensible to the irritation of the urine, I resolved to employ it in the formation of a canal, and to endeavour to connect by it the two portions of the urethra: for, as many months had elapsed since the healing of the wound, all contraction in the cicatrix had ceased, and it was probable that a passage formed of such parts would not be liable to any farther diminution in its calibre.

"On the other hand, I had to contend with two great difficulties: in the first place, the portion of cicatrized integument intended to be separated, was not of original formation; consequently, it was endued with less vital energy, and possessed fewer blood-vessels:

econdly, it was not possible to allow the parts to be at rest for the completion of any curative process for many hours together: the force also with which the urine was expelled, and the acrid nature of that discharge, were alike unfavourable to the cure by adhesive inflammation. All these circumstances having been well considered, a portion of integument was removed about an inch and a half long, and one third of an inch in width, on the left side of the cicatrix; the groove thus formed being intended to receive the edge of skin to be detached from the opposite side. An incision was then made across the perineum above and below, so as to pare away the callous edges of the urethra. The cutis was next dissected off from a portion of integument on the right side of the perineum, about an inch and a half in length and half an inch broad, leaving a smooth space of rather more than an inch between the cut surfaces, which was intended to form the lining of the new canal. The integuments on the right side were now dissected up, turned over a catheter, and brought in contact with the opposite groove. The detached portion of cicatrix bled little during the operation, and before it could be applied to the groove, the edge had so livid an appearance as to create an apprehension that it must perish. Two ligatures were employed to assist in retaining it in the desired position, and some straps of adhesive plaster and a bandage completed the dressings. The day following the operation, it was evident that some urine had escaped by the side of the catheter; and on the third day, when it became necessary to remove the dressings, it was found that the portion of the flesh which had been denuded of skin had sloughed, but that a sufficient quantity had united above and below to form a canal open at one side, and large enough to include the whole catheter." 7.

This was as favourable a result as could be expected under existing circumstances. The two surfaces, from whence the integuments had been removed, were now suffered to heal, but as the cicatrix on the right contracted, it drew the newly formed canal rather to that side, and tended to increase the opening into it. Soon after this the patient became much disordered in his health, and had an attack of lepra vulgaris, on which account nothing was attempted for some months, except several times freely excoriating the edges of the canal, and thus endeavouring to unite them by keeping them in contact. In this Mr. Earle was constantly foiled by the astonishing rapidity with which the skinning process took place from within outwards—apparently arising from the moist state in which the parts were constantly kept.*

* "In corroboration of this," says Mr. Earle, "I have lately employed bread and water poultices to healthy sores, which have skinned over with greater rapidity than under any other application. Since making these experiments, I have learnt that Professor KERN, of Vienna, employs no other local remedy

In the summer of 1820 another operation was deemed advisable.

"A deep groove was made on the right side, the surface was denuded of its cutis to some extent, a considerable portion of integument was then detached from the left side, and, in order to obtain healthy skin, I encroached a little on the thigh, and laid bare the edge of the fascia lata. Instead of passing any ligature through the detached portion, the old quill suture was employed, which was passed from the two outer cut surfaces. A pad of adhesive plaster was interposed between the ligatures and the flap of skin, to diffuse the pressure more generally; and my patient, being now quite an adept in passing the catheter, was directed to introduce it about three times in the twenty-four hours, instead of retaining it in the bladder, which had permitted some of the urine to pass insensibly away, and had acted prejudicially in the former operation. By this attempt much more was gained, and about two-thirds of the canal were completed; still, however, there remained a small aperture at the upper part. We again attempted to close this by denuding the edges with escharotics and the lancet, but it skinned over too rapidly to allow of any union between the opposite surfaces. A third operation on a smaller scale was therefore necessary, which so nearly completed the cure as to leave only an orifice large enough to admit a bristle, which has subsequently closed and at the present time, (March 1821,) he remains perfectly well, and is able to expel the contents of his bladder *pleno rivo*." P. 9.

The above operation is very creditable to the ingenuity and perseverance of Mr. Earle. The breach in the urethra of Mr. Earle's patient appears to have been larger than in the cases operated on by Sir Astley Cooper, and published in that gentleman's Surgical Essays.

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in the cure of ulcers, than water and a simple covering of linen. It is a curious fact, that in the sixteenth century, when the art of surgery was encumbered with useless nostrums and complicated instruments, and when the actual cautery and hot oils were the favourite remedies, that a similar simplicity of treatment should have been employed by MAISTRE DOUBLET, a contemporary of AMBROSE PAREY, of whom BRANTOME tells us,

"'Et toutes ses cures faisoit le dit GOUBLET par un simple linge blanc et belle eau simple de la fontaine ou des puits.'"

"The liver, it appears from what has been said, is the part which most frequently suffers by sympathy in the second stage of indigestion. It therefore often happens, that when those labouring under this stage are attacked with fever, a train of symptoms similar to that detailed in page 271, supervenes, the proper treatment of which is essential to that of the fever.

"The principle of the treatment of these symptoms, when they occur in fever, is precisely the same as where they supervene without it, but the actual practice is not altogether so. The fever, in its early stages, by adding to the severity of the inflammatory symptoms, renders more active means necessary. Hence, if the general symptoms do not indicate general loss of blood, a greater local abstraction of it is usually proper, than when no fever but that occasioned by the local affection attends.

"The same observation applies to the use of cathartics. At the commencement of fever the free action of the bowels is particularly beneficial, and by such a state of the liver is rendered doubly so. It is thus that brisk doses of calomel at this period are generally more beneficial than other mercurials.

"In the latter stages of fever, on the contrary, if this affection of the liver still continue, which is not uncommon, either from its having been neglected in the early stage, or from its proving more obstinate than usual, I have always found the minute doses of blue pill above specified, given every six or eight hours, most beneficial. Combined, indeed, with moderate evacuations of blood from the part, or (when the tenderness is inconsiderable, and the affection of the liver rather betrays itself by a vitiated secretion of bile, than by inflammatory symptoms,) blisters applied to the region of this organ, they rarely fail to restore due action to it, unless the nature of the fever, or constitution of the patient, be very unfavourable; and thus often remove the fever, which, when its symptoms have become mild, is frequently at this period prolonged by the local affection alone.

"When the sympathetic disease, previous to the attack of fever, has chiefly affected other parts, the bowels, the lungs, the brain, &c. we still find the part most affected by that disease, suffering most in the fever; and the same plan of treatment, *mutatis mutandis*, is applicable, except that the same benefit is not to be expected from the specific operation of mercury.

"When indigestion has not arrived at its second stage at the time the fever makes its attack, the accession of this disease, by increasing the inflammatory tendency, often induces that stage. The vessels, although they had not been sufficiently weakened to yield to the usual force of the circulation, yield to its increased force; and it particularly deserves attention, that an attack of fever, as I have repeatedly witnessed, is often the means of permanently converting the first into the second stage of indigestion; so that the fever leaves behind it tenderness of the epigastrium, and more or less hardness of the pulse, where they had not previously existed.

"When this is the case to any considerable degree, the patient

generally becomes liable to a renewal of fever from slight causes; and if the morbid state of the digestive organs is not removed, he is often exhausted by repeated attacks of fever, which, as the debility increases, assume a more chronic form, and often at length terminate in typhus, or the more severe species of what has been called nervous fever.

"Local congestion or inflammation, as might be expected, although none of the symptoms of indigestion have preceded, sometimes takes place in fever, that is, when the force of the circulation is morbidly increased. This is most apt to happen in the brain or liver.

The principle of treatment, as far as I have been able to observe, is still the same. In the latter case, however, the means of relief are generally sooner successful, and the patient bears them better. The treatment of fever, in those who have long laboured under the symptoms of indigestion, requires great circumspection. It is surprising after how moderate a degree of fever symptoms of danger often arise in them, and indeed death itself actually ensues. Both the vascular and nervous systems of some organ necessary to life have been previously enfeebled, and it wholly loses its power before the fever produces any very general effect. The patient dies as much of the disease under which he has so long laboured, as of the fever which has supervened on it, and that at a time perhaps when his physician's mind is fatally abstracted from the former. These observations have been so often impressed on me in the course of practice, that I cannot help, in a particular manner, calling the attention of others to them. The more we see of disease, we shall, I think, be the more ready to admit that the digestive organs form so important a part of the animal system, and are so intimately connected with every other part of it, that there is no case in which their state can with safety be disregarded." 311.

The rapid exhaustion of the first edition, (though not always an infallible criterion of superlative merit in a book) together with the very general expression of approbation which we hear from all quarters, sufficiently attest that Dr. Philip's work has passed the ordeal of criticism with triumph, and may now be ranked among the standard productions of the British press.

XIII.

Medico-Chirurgical Transactions. Vol. XI. Part 2, with Plates.

Were we to say that the volume before us is equal, in interest or importance, to its earlier predecessors, we should certainly have the character of our judgment or veracity suspected. And as we do not deem it necessary to sacrifice this character for the sake of complimenting a public body, (which neither needs nor cares for compliments,) we shall candidly confess, that our disappointment and regret have, for some time, been excited by the "falling off" of transactions which, at one period, commanded the respect, and called forth the admiration, of Europe and America. It is perhaps needless to inquire into the cause or causes of this decadence, since we perceive it to be an inherent principle in every human institution or production, whether of the head or the hand. Is it very astonishing, then, that the periodical transactions of the Medico-Chirurgical Society should bow to that universal mandate of Nature which declares that—

> The seas shall waste, the skies in smoke decay,
> Rocks fall to dust, and mountains melt away!

It would be much more astonishing, indeed, if these transactions presented an exception which would be the only one in the annals of the world—and in nothing more srange than in the records of periodical publications on medicine.

As a bright side to this sombre picture we are happy to be able to state that, while the papers read at the Medico-Chirurgical Society have declined in value, the Society itself has risen and is still rising in numbers, respectability, and influence. It is also gratifying to add that, while the communications are not unfrequently of an inferior character, the discussions arising out of them very often assume the highest interest and importance.

We have one remark to add, before we proceed to our analytical labours. We imagine that the society would do well to imitate the conduct of many societies on the Continent, by publishing *abstracts* of those papers which cannot be admitted, in their original forms, into the transactions. Many important hints and valuable facts would then be preserved for the profession at large—nor do we believe that the writers of these papers would feel displeased at the publication of their communications in a condensed form—on the contrary, we imagine they would prefer this to their entire suppression.

tion on different parts of it in succession, in order to guard against inflammation in the mucous membrane of the trachea.

The deformity succeeding the cure has been found to disappear in great measure in a few months.

It has been asserted by Mr. Nerman, a student from Sweden, that in Denmark it is a common practice to make incisions into the substance of the diseased gland, and that bronchocele is thus frequently cured; but we are not informed whether the suppurative process is afterward established or not. This disease has also been successfully treated by Dr. Coindet of Geneva, with solution or tincture of iodine; and Dr. Straub, of Howfyl, asserts, that this medicine may be advantageously used in all cases in which burnt sponge has been employed.

To the above case, in which the seton was employed, Mr. Hutchison adds one by Mr. Gunning, surgeon to St. George's Hospital, three by Mr. A. T. Thompson, and one by Mr James, of the Devon and Exeter Hospital. In Mr. Gunning's case, eight days after the operation, the seton was removed, the parts contiguous to it being in a sloughing state; and in a few days after the separation of the sloughs, the patient's health having gradually declined, she died after one of the severe attacks of tracheal irritation, to which she had been subject. The remaining portion of the thyroid gland was in a sloughing condition, and some slight streaks of inflammation were discovered in the lining membrane of the trachea after death.

In the first of Mr. Thompson's cases the operation was successful. A considerable discharge of blood followed immediately, and a slight one continued during two or three days. The seton was removed at the end of two months The result of the practice in the second experiment was not known. The third case occurred in a man, aged sixty-one. The swelling was of the soft kind. The seton was withdrawn in three weeks, the tumour being greatly reduced.

Mr. Thompson was partly induced to try the effects of the seton, having witnessed the cure of a very large bronchocele by the application of a caustic, which occasioned the whole of the diseased gland to separate at the end of five months.

Mr. James's case was a most interesting one. The patient, a man aged 35, had received the best assistance which could be afforded him, without experiencing any benefit. The tumour was firm and elastic, and of the size of a flattened orange. The progressive increase of it and the accompanying symptoms threatened his destruction. The seton was introduced through the centre of the swelling from the upper to the lower part. The next day, the obstruction returning and the face being flushed, he was bled and purged. The dyspnœa increasing, attended with distressing cough, suppression of the voice as in laryngitis, copious expectoration, haggard countenance, and a frequent, small, and weak pulse, the seton was taken out about ten days after the operation. At this time the patient expectorated transparent firm lymph, having the appear-

Symptoms. Gradually increasing tenderness of the abdomen, soon followed by paroxysms of acute pain, which grows more frequent and violent, and spreads from one part over the whole of the abdomen. The belly is at first enlarged and tense, and we have seen it completely tympanitic; but, as the disease advances, the swelling abates or subsides altogether, and is seldom perceptible after death. The pulse about 100; tongue generally clean; appetite irregular; thirst; intestinal discharges frequent, at first slimy and afterward consisting of a whitish brown matter, and greatly exceeding in quantity the medicine and other ingesta. Emaciation, and in four or five months diarrhœa and petechiæ, which in three or four days destroys the patient. Strangury is a common symptom, and in several instances we have satisfactorily ascertained that there have existed a periodical increase of pain and a febrile exacerbation, for the most part after midnight.

Necrotomy. Dr. G's. description of the morbid appearances on dissection exactly correspond with those, which we have ourselves witnessed.

"On cutting through the parietes of the abdomen, all trace of abdominal cavity will be wanting. The mesentery, bowels, and peritonæum lining the parietes, will be found united together into one mass. The peritonæum, in all its duplicatures, appears thickened; and, on cutting through the diseased mass, very large quantities of scrofulous matter will be found. The mucous membrane of the bowels, particularly (of) the small intestines, appears ulcerated in various places, and at these points of ulceration the convolutions of the intestines communicate, so that, instead of forming one line of canal, as they will continue to do even in advanced stages of common chronic peritonitis, they constitute a mass of tubes communicating freely with each other, and with the thickened and ulcerated peritonæal membrane by innumerable openings. The matter, which will be found both within and without the mucous membrane, will be observed to correspond exactly with that which was passing during life by stool. 266.

Treatment. Little impression having been produced on the disease by any medical treatment, Dr. G. has enumerated only a few remedies, and on these he appears to place no reliance. When laudanum becomes necessary in the latter period of the malady, he has not found it to produce constipation.

Diagnosis. Abdominal tenderness and paroxysms of pain, followed by the discharge of large quantities of thick white matter by stool, are considered by Dr. G. sufficient peculiarities to distinguish the scrofulous peritonæal inflammation from the other species of marasmus.

Dr. Gregory proposes to offer to the Society, on some future occasion, observations respecting hydrocephalus, when he will add his farther experience in the different species of marasmus. We shall be happy to give extended publicity to Dr. Gregory's remarks at all times.

The next day the pulse having become hard and quick, he was bled from a large orifice, and other symptoms were relieved by aperients and sudorifics, and by opiates at bed-time; and about the eighth day the aneurismal mass had subsided to half its pristine size, and the contracted pupil had nearly recovered its natural dilatation and sensibility. On the 33d day the tumour was much enlarged and tender, and a blush of inflammation appeared on both sides of the neck, attended with much pain in the throat. The 34th day, the pulse being hard, venesection both local and general was had recourse to, and a fluctuation being evident, an opening was made, which gave vent to seven ounces of offensive blood and pus. On the 55th day six ounces of florid blood were suddenly discharged from the aneurismal sac, after which the hæmorrhage spontaneously ceased; and the pulse remaining hard, bleeding from the arm was again repeated. The tonsils were then inflamed. From this to the 63d day hæmorrhage repeatedly appeared; and about the 67th day the patient fell into a state of collapse with dysphagia, singultus, and anxiety, and in the evening expired.

Necrotomy. The ligature had been applied to the artery at the distance of an inch and a half from its origin. The vessel itself was impervious for the space of an inch. An artery, which admitted a probe, was discovered extending from the lower jaw into the sac. The back part of the aneurismal bag adhered to the bodies of four of the vertebræ.

Mr. Coates is inclined to believe that the event of this case might have been more fortunate, had the contents of the tumour been evacuated by art, before the inflammation had made its appearance.

VI. *Case of Malformation of the Heart.* By George Gregory, M. D. Senior Physician to the St. George's and St. James's Dispensary.

The patient was from birth of a blue colour, thin, and subject to constant dyspnœa; and at the age of eighteen years he died of pulmonary consumption.

The preternatural appearances in the heart were the following: the aorta and pulmonary artery arose from the right ventricle; the septum ventriculorum was deficient at its base; the opening in the septum corresponded exactly with the situation of the aorta at its origin, and effected a communication between the ventricles; the pulmonary artery was but little smaller than usual.

VII. *A Case of Chorea successfully treated by Arsenic.* By George Gregory, M. D. Senior Physician to the St. George's and St. James's Dispensary.

The Species of Chorea, for which arsenic has been successfully exhibited, is *said to be* unaccompanied with disorder in the stomach and bowels.

effects will be found analogous to those of any other vegetable astringent. The cases which are brought forward, and the praises bestowed upon it, by no means satisfy us that it possesses any specific property in the cure of disease, besides what might be expected to result from its astringency. The pathology of fever is now so much better understood, than it was when cinchona was first introduced, that few modern practitioners will, we apprehend, be solicitous to obtain any substitute for a medicine which is likely soon to be nearly exploded.

X. *On the Physiology of the Ear.* By JOSEPH SWAN, Esq. Lincoln.

THE Medico-Chirurgical Society some time ago published a paper of Mr. Swan's respecting the physiology and pathology of the ear, in which he presumed that people born deaf and dumb, and who had no defect in the auditory nerves, might be made to hear through the medium of the facial nerves, and thus have their unfortunate situation amended. To substantiate this opinion, he has in the present volume adduced a case, in which the external passage to the ear was imperforate, and sounds were heard through the nerves on the face. The person can also speak intelligibly.

Mr. Swan thinks that the reason why those who are born deaf are not more frequently able to acquire a degree of perfection in hearing, is because their whole attention is apt to be taken up with signs, and no methods have been generally used to increase the power of the provision usually made by Nature for supplying the defects occasioned by imperfections of the tympanum.

"Presuming that what I have said is well founded, it is not reasonable to expect that the powers of the facial nerves should ever be fully developed in dumb children, if their instructers do not direct the whole, or by far the greater part of their attention to the proper exercise of these nerves. And if this is to be done effectually, it must probably first be by the assistance of instruments, to increase the effect of sound; and when these have been properly used, and have answered the intended purpose, then by gradually lessening their power until common sounds can be heard." P. 336.

XI. *Case of Amputation of Part of the Tarsus and Metatarsus, and Preservation of the Shape and Usefulness of the Foot.* By JOHN DUNN, Esq. Scarborough.

A BOY had suffered more than two years with caries in the bones of the tarsus attended with hectic fever. A tourniquet being applied to the thigh, Mr. Dunn cut through the extensor-tendons of the foot, and removed the os cuboides and the external cuneiform bone. No serious hæmorrhage followed. An improvement having taken place in the boy's health, about three weeks afterward the two

"The instrument gave but little pain on its introduction, but when opened to its greatest extent, and the stones admitted between its blades, their removal was painful, more especially at the glans penis, which appears to be the portion of the urethra, which furnishes the greatest resistance to the removal of the stones." 359.

A dose of opium was given after each operation, which was repeated seven times before the calculi were all removed.

We have had opportunities of seeing this distinguished surgeon make use of this instrument, which appears an admirable invention, and perhaps capable of still farther improvement.

XIII. *On Sloughing Phagedæna.* By Richard Wilbank, Esq.

Mr. Wilbank has generally noticed this disease in the lowest class of prostitutes. It begins in the form of an irritable boil, elevated and surrounded by a dusky inflammation, seated generally in the clift of the nates, in the groin, or upper part of the thigh. The apex of the boil vesicates, and, bursting, exposes a stratum of adherent straw-coloured flocculi, with a viscid secretion resembling pus, which is interspersed with darker points of a brown or gray tint. The surface enlarging, the centre becomes depressed, and the oval or circular sore is surrounded by a circumscribed thickening and an increasing halo of dark inflammation. From the darker points of the ulcer hæmorrhage occurs at times, and a peculiar fetid odour is observable. As the putrescence of the slough advances, much foul secretion appears, and shreds of pulpy matter are detached by the removal of the dressings. The sloughs are gray or dark brown. The pain becomes constant and agonizing, and the patient is found lying on her back with the thighs separated and bent upwards. The disease now spreads with rapid strides and is highly contagious. At length the constitution participates in the mischief which is going on: restlessness, loss of appetite, furred tongues, anxiety, pains in various parts of the head, accelerated pulse, hot skin, thirst, bilious vomiting and purging present themselves. Delirium rarely supervenes.

Treatment. Mercury has been constantly found exceeding hurtful. Bleeding, particularly, in plethoric habits, is proper in the early stage; but leeches are objectionable on account of the tendency of their bites to assume the morbid action of the adjoining parts. Large doses of opium at regular intervals are serviceable, particularly where the stomach is irritable. Bark is generally contra-indicated by the disposition to diarrhœa. The local means, on which indeed Mr. W. places his principal reliance, both for relief and cure, consist in the application of nitric acid and other stimulating dressings.

"The method from which I have derived most benefit is as follows: if the disease be not far advanced, I at once apply the

was made with the scalpel on each side of the iliac artery, and a ligature was carried under it and tied. The wound was brought together with a suture and adhesive plasters. No difference in the temperature of the extremities followed, and, on the third day, the wound had united. On the seventh day, the wound was disunited by a discharge of sanies and pus. Three weeks after the operation, the ligature came away, and the wound had nearly healed; and at the end of two months, the man was discharged in good health, with a free use of his limb, and scarcely any tumour.

XVII. *On Lithotomy.* By PHILIP M. MARTINEAU, Esq. Senior Surgeon to the Norfolk and Norwich Hospital.

MR. Martineau is an advocate for the lateral operation, and attempts to prove that Mr. Carpue's reasons for preferring the high operation are by no means conclusive.

In the first years of his practice Mr. M. was not very successful, and, finding that his misfortunes arose from the use of the cutting gorget, he laid it aside. During the last seventeen years, he has employed the knife only, and the blunt gorget as a conductor for the forceps; and in this period, he has only lost two, out of eighty-four patients. He subjoins a table, showing the age, name, and event of every case. The first incision is made nearly in a line with the raphé, and the staff he uses has a groove much wider and deeper than is commonly made. Feeling the groove of the staff, he introduces the point of the knife into it, as low down as he can, and cuts the membranous part of the urethra, continuing the knife through the prostate into the bladder. Instead of enlarging the wound downwards, he turns the edge of the blade towards the ischium, and makes a lateral enlargement of the wound in withdrawing the knife. He takes the *staff into his left hand*, while he introduces the blunt gorget with his right; and, after the latter is within the bladder, he introduces his finger, and endeavours to feel the situation of the stone. He always uses the straight forceps, and says it will be found more easy to extract a stone whole by rather large forceps, than with flat or small ones.

After the operation, a piece of lint is laid *over* the wound, and the air is excluded as much as possible, by a pledget of tow: it being Mr. M's. object to heal by the first intention. Coagula are removed by the finger pushed through the opening into the bladder, or by a female catheter. Pain should be relieved by opium, and abdominal tension by fomentations, blisters, and aperients. Mr. M. *never bleeds* his patients after lithotomy, and observes, that he has witnessed such debility succeed venesection, as could not be overcome; and he considers leeches altogether useless. The diet for the first two or three days, is mild, and, if fever and inflammation are absent, it is afterward more generous. In general, Mr. M. believes, that death is oftener produced by exhaustion and despondency, than by acute disease.

three-fourths of an inch, and a circular portion removed, the diameter of which might have been nearly one-fourth of an inch." 419.

The moment the air was admitted through the wound into the trachea, the patient felt immediate relief, and began to recover his sensibility. A silver tube was passed into the aperture and retained by means of tape. Although the central slip, connecting the thyroid lobes, was completely divided, there was scarcely any bleeding. One large thyroid vein is sometimes found running along the middle of the trachea, which should always be carefully avoided.

Two more ten-grain doses of calomel were given at intervals after the operation, and warm wine and water allowed. The second day, the canula having slipped out, the symptoms returned, but were speedily relieved. Three more ten-grain doses of calomel were taken, and on the third day two doses of the same strength, although the bowels were open. On the fourth day salivation commenced, and the man made a good attempt to speak; and on the fifth, the opening into the trachea being found too small, it was enlarged, so as to render it three-eighths of an inch long. From this time nothing particular occurred to retard his recovery; and on the 21st day after the operation the wound in the trachea had united, and the patient was soon afterward discharged in perfect health.

When inflammation in the larynx assumes an acute form, Mr. Porter conceives that it is probable an effusion of fluid may take place in the submucous structure in such quantity, and with such rapidity, as to close up the passage and produce suffocation.

"A melancholy proof of this lately occurred in the person of a young gentleman of high attainments; he only complained during the day of sore throat, and on the morning following was found in his bed quite dead. On dissection, the rima glottidis was found completely closed by the œdematous swelling of the mucous membrane." P. 428.

As soon as the nature of the disease is ascertained, and it is found to be of an active nature, Mr. P. advises as early an operation as possible, with the view of preventing the formation of disease in the lungs, as well as of affording speedy relief to the sufferings of the patient.

"If, then, the disease has occurred suddenly, and its symptoms have attained an alarming height in a short space of time, if there is expressive difficulty of breathing, and laborious muscular efforts to carry it on, the practitioner has but one resource, and that one will be in an operation. And although it is very possible that even in this he may not prove successful, if diseased action has already been formed in the lungs, yet he will be justified in the attempt, from the consideration that it is the only hope of safety he can hold out to his patient, and he will, at all events, be in some degree rewarded by the immediate alleviation it will afford to the most distressing symptoms." 437.

In the chronic as well as in the acute form of the disease, there is

APPENDIX I. *Abstract of the Account of a Case of Adhesion of the Labia Pudendi in a Negro, obstructing Delivery, drawn up by* DR. WILLIAM RUSSEL, of Jamaica: *presented to the Society by* WILLIAM ROOTS, Esq. Surgeon of Kingston on Thames; *dated, Cascade, St. Mary, Jamaica, June* 12, 1819.

APPENDIX II. *Account of a Child of three Years of Age, in whom there appeared Signs of Puberty. Abstracted from a Paper communicated to the Society by* GILBERT BRESCHET, M. D. Superintendent of the Anatomical Department of the Faculty of Medicine in Paris; *dated, December,* 1820.

A boy, between three and four years old, with the same signs of premature puberty, is now exhibiting in London.

XIV.

*Opiologia; or Confessions of an English Opium-Eater; being an Extract from the Life of a Scholar.**

"Charmed with that potent drug, th' exalted mind
"All sense of wo delivers to the wind;—
"It clears the cloudy front of wrinkled care,
"And dries the tearful sluices of despair.
"Though on the blazing pile his parent lay,
"Or a lov'd brother groan'd his life away,
"From morn to eve, impassive and serene,
"The 'Opium Eater' views the deathful scene."

Odyssey, Lib. IV.

WHEN we first glanced at this production, we considered the title as a mere vehicle, through which some romantic or satirical tale was to be conveyed. On reading a little farther, we soon perceived that this first impression was erroneous, and that these confessions bore intrinsic marks of authenticity. We have since been satisfied, by proofs the most unequivocal, of the respectability of the personage, and the truth of the narrative. The perusal of this interesting paper recalled to our memories many images and sensations of early life, now nearly obliterated by time, though stamped, at the period of occurrence, with more than common force of impression. We too were opium-eaters—but on a very limited scale, and for a very short time, compared with the author now under consideration. We well recollect, however, the inexpressible delight produced by opium, when prostrate on the bed of

* See London Magazine for September and October, 1821.

state of human knowledge generally. In the moral and metaphysical sciences too, we have no doubt he is deeply read. May we add, that these affecting narratives, much as they have impressed us with respect for the author's head, have still more deeply interested us in favour of his heart—an event that may well be gratifying to the feelings of the proudest.

We shall enter no farther into the history of this remarkable individual than is necessary for the medical part of the subject that follows.

Educated at a public school, (Eton we imagine,) our author soon outstripped his tutors in classical, and especially Grecian literature. He therefore became impatient of restraint, and not obtaining the permission of a surly guardian to leave his alma mater, he *evanesced* (to use a quaint expression of his own on a very different occasion) at the age of seventeen, and with only ten or twelve pounds in his pocket. When this short pittance was expended in rambling through Wales, our author was forced to pick up a precarious subsistence among the country folks, by writing letters, &c. but even this failing, he repaired to the metropolis, and for several months led a wretched life of misery, want, and mental anxiety. It was at this period, therefore, that long and cruel fasts injured the tone of his digestive organs, *prior* to opium-eating, and, in our humble opinion, as we shall hereafter more fully show, gave a peculiar hue to all the pleasures and pains of that wonderful drug. "I now suffered," says he, "for upwards of sixteen weeks, the physical anguish of hunger in various degrees of intensity; but as bitter, perhaps, as ever any human being can have suffered who has survived it." For some time in Wales, and for the first two months in London, he very seldom slept under a roof; and when the winter set in, his corporeal frame began to give way, and indeed it was astonishing that he did not sink under his sufferings. Perhaps his unparalleled abstinence preserved him, during this houseless penury and exposure to all the "skiey influences," from inflammatory affections of some internal organ. In this dreadful extremity our author received a ten pound note—a mine of wealth for a person in such a condition! He bought a two-penny loaf, but remembering the story of Otway, he dreaded the effects of eating it too rapidly. There was no danger. His appetite was gone—and he turned sick before he could eat half of it Shortly after this, he called on an old school-fellow, who placed before him a magnificent breakfast—he could not touch it! "I had, however," says our unfortunate author, "a craving for wine. This gave me a momen-

state of body at all resembling that which is produced by alcohol—and not in *degree* only incapable, but even in *kind.*" We cannot bring ourselves to coincide entirely in this passage. The first sensations produced by wine in the stomach, and through that on the whole sentient system, appear to us analogous, though certainly not identical with opium. There seems indeed an affinity in the effects of all the narcotic or hypnotic class. The Englishman, if irritated during inebriety, runs a Muck on wine, brandy, or ale, as much as the Malay on bang and opium, when under the influence of powerful passions. We will let the opium-eater, however, draw his own distinctions between the physical effects of opium and wine.

"The pleasure given by wine is always mounting, and tending to a crisis, after which it declines; that from opium, when once generated, is stationary for eight or ten hours; the first, to borrow a technical distinction from medicine, is a case of acute—the second, of chronic pleasure; the one is a flame, the other a steady and equable glow. But the main distinction lies in this, that whereas wine disorders the mental faculties, opium, on the contrary (if taken in a proper manner,) introduces amongst them the most exquisite order, legislation, and harmony. Wine robs a man of his self-possession; opium greatly invigorates it. Wine unsettles and clouds the judgment, and gives a preternatural brightness and a vivid exaltation to the contempts and the admirations, the loves and the hatreds, of the drinker; opium, on the contrary, communicates serenity and equipoise to all the faculties, active or passive; and with respect to the temper and moral feelings in general, it gives simply that sort of vital warmth which is approved by the judgment, and which would probably always accompany a bodily constitution of primeval or antediluvian health. Thus, for instance, opium, like wine, gives an expansion to the heart and the benevolent affections; but then, with this remarkable difference, that in the sudden developement of kind-heartedness which accompanies inebriation, there is always more or less of a maudlin character, which exposes it to the contempt of the bystander. Men shake hands, swear eternal friendship, and shed tears—no mortal knows why; and the sensual creature is clearly uppermost. But the expansion of the benigner feelings, incident to opium, is no febrile access, but a healthy restoration to that state which the mind would naturally recover upon the removal of any deep-seated irritation of pain that had disturbed and quarrelled with the impulses of a heart originally just and good.

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especially if not long accustomed to it, are so transported with the pleasing sense it induces, that they are, as they often express themselves, in Heaven; and though they do not always sleep, yet they enjoy so perfect an indolence and quiet, that no happiness in the world can surpass the charms of this agreeable ecstacy."—*On Poisons.*

this statement as applied to the individual, but not to the species. Every medical man knows that whenever a degree of excitement is produced in the system, (and that there is some degree of excitement produced by opium, directly or consecutively, must be admitted,) a state more or less contrary succeeds, as a general law of the animal economy. We see, indeed, individuals occasionally resist this secondary effect, for a long time; but sooner or later the law of Nature must be obeyed. In the prime of life, some men will get intoxicated with alcohol every night, for years in succession, and yet evince no symptom of languor or headach the next day. But let the practice be continued, and a time will come, when if the habitual stimulus be not applied at the usual hour, a depression takes place, and a dreadful want is felt of the inebriating material. It is so with opium on men in general; and for the proof of this we must look to many, and not to an individual. Dr. Smyth, (Philosoph. Trans. No. 223,) while at Smyrna, took pains to observe what were the doses of opium used by the Turks in general. He found that three drachms in the day were a common quantity among the larger consumers; but they could take six drachms a day without inconvenience. A turk ate this quantity before him, with no other effect than that of producing great cheerfulness. But Dr. Smyth remarked that this habitual use of the drug greatly impairs the constitution. "The persons who accustom themselves to it, can by no means live without it, and are feeble and weak. They are also often of a yellow complexion, and look much older than they really are." This accords with what we have observed in the Eastern world, and among a few people in this country, who were addicted to opium. Dr. Russel confirms this statement. The immediate effects which he observed it to have on those who took it habitually were, an exhilaration of spirits—"and from a dosing depressed state into which they sunk after passing the usual time of taking their dose, they became quite alert."—*Hist. of Aleppo.* Again the same respectable authority asserts that—"the consequences of a

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"the most experienced swallow four pieces of opium, each larger than an olive, every one drinking a large glass of water upon them, and then waiting in some particular attitude for an agreeable reverie, which at the end of three quarters of an hour, never fails to animate these machines, and make them gesticulate in a hundred different manners; *but they are always very extraordinary and very gay.* This is the moment when the scene becomes most interesting. All the actors are happy: *Each turns home in a state of total ebriety,* but in the full and perfect possession of a happiness which reason is not able to procure him."

taining account of the mode in which he heightened his pleasure by the aid of opium. One of his favourite amusements was the Opera—and a dose of opium rendered Grassini's notes divine beyond the songs of the Sirens! Another enjoyment, was to sally forth on Saturday nights, after a dram of laudanum, to see the industrious classes of this great metropolis go to market, and provide for the general banquet of the succeeding day. The scenes which he then witnessed, are naturally and feelingly described; and it is melancholy to relate that, for all these philanthropic enjoyments, he paid a heavy price in after years, when the human face tyrannized over his dreams, and the perplexities of his steps in London came back and haunted his sleep, with the feelings of perplexities, moral or intellectual, that brought confusion to the reason, or anguish and remorse to the conscience! We can cordially sympathize with the unhappy confessor on this part of his afflictions, for reasons which will presently appear.

While our author brings forward this part of his history, to prove that opium does not *necessarily* produce inactivity, or torpor, yet he candidly confesses, that markets and theatres are not the appropriate haunts of the opium-eater, when in the divinest state incident to his enjoyment.

"In that state, crowds become an oppression to him; music even, too sensual and gross. He naturally seeks solitude and silence, as indispensable conditions of those trances, or profoundest reveries, which are the crown and consummation of what opium can do for human nature." 361.

Our author often, in after years, fell into these reveries on taking opium, and has, more than once, sat motionless at a window commanding a view of the sea, from sunset to sunrise. From his apostrophe to opium, we shall introduce the following short extract.

"Oh! just, subtle, and mighty opium! that to the hearts of poor and rich alike, for the wounds that will never heal, and for "the pangs that tempt the spirit to rebel," bringest an assuaging balm; eloquent opium! that with thy potent rhetoric stealest away the purposes of wrath; and to the guilty man, for one night givest back the hopes of his youth, and hands washed pure from blood; and to the proud man, a brief oblivion for

Wrongs, unredressed, and insults unavenged."

Eight years rolled away in the full enjoyment of the pleasures of opium—taken *only* on Saturday nights—and never exceeding twenty-five ounces of laudanum at a dose.* No-

* The author, of course, is joking here. He alludes to an error of the press, in Buchan's Domestic Medicine, where the patient is cautioned never to ta'

pleasures which he derived from opium, during the intercalary year, (part of 1816 and 1817)—the millennium of his happiness,—he sketches himself, his cottage, his wife, his books, his tea equipage, and his quart decanter of laudanum, on a stormy winter evening. We can imagine the pleasures of a scholar's fireside, surrounded by such objects, animate and inanimate; and we can sympathize with the unfortunate tenant, who was on the eve of exchanging all these tranquil enjoyments, and pleasing dreams of fancy, for the pains and horrors of opium—for the—

"Somnia, terrores magicos, miracula, sagas,
"Nocturnos lemures, portentaque Thessala—"

And now a long farewell to happiness—farewell to peace of mind—farewell to hope, to tranquil dreams, and the blessed consolations of sleep! From these, the opium-eater was summoned away for three years and a half—he now, in one word, has arrived at the Iliad of his woes!

The first misery which he describes, is the torpor of his intellect—a sad misfortune for a scholar! For nearly two years, he read no book but one.—And what was that?—Ricardo on Political Economy. He was unable to answer letters, or attend to any part of his own financial concerns, though so anxious about those of the nation.

"I shall not afterward allude to this part of the case; it is one, however, which the opium-eater will find, in the end, as oppressive and tormenting as any other, from the sense of incapacity and feebleness, from the direct embarrassments incident to the neglect or procrastination of each day's appropriate duties, and from the remorse which must often exasperate the stings of these evils to a reflective and conscientious mind. The opium-eater loses none of his moral sensibilities, or aspirations; he wishes and longs, as earnestly as ever, to realize what he believes possible, and feels to be exacted by duty; but his intellectual apprehension of what is possible infinitely outruns his power, not of execution only, but even of power to attempt. He lies under the weight of incubus and night-mare: he lies in sight of all that he would fain perform, just as a man forcibly confined to his bed by the mortal languor of a relaxing disease who is compelled to witness injury or outrage offered to some object of his tenderest love:—he curses the spells which chain him down from motion:—he would lay down his life if he might but get up and walk; but he is powerless as an infant, and cannot even attempt to rise." 372.

But the main part of our author's suffering, and the principal subject of these confessions, were his DREAMS. The first intimation he had of any important change going on this part of his physical economy, was in the middle of 1817, when a kind of waking faculty of conjuring up all sorts of phantoms in the dark, became truly distressing to him.

*getfulness** attached to the mind. A thousand accidents may, and will interpose a veil between our present consciousness, and the secret inscriptions on the mind. Accidents of the same kind will also rend away the veil; "but alike, whether veiled or unveiled, the inscription remains for ever." We are greatly inclined to go the whole length which our author goes on this point, from the astonishing power which the mind has, of calling up images impressed in the earliest periods of life. We firmly believe, too, that all those incongruous and unfamiliar representations which arise in sleep, are fragments of real impressions, combined, distorted, magnified, or multiplied by the imagination.

Our author relates dreams illustrative of the four circumstances above mentioned, but we dare not cite more than one or two in this Journal. His dreams were principally at first architectural—to these succeeded dreams of lakes, and silvery expanses of water. These last haunted him so much that he feared some dropsical state of the brain was taking place. The waters now changed their characters from translucent lakes and shining mirrors, to seas and oceans.

"And now came a tremendous change, which, unfolding itself slowly like a scroll, through many months, promised an abiding torment, and, in fact, it never left me until the winding up of my case. Hitherto the human face had mixed often in my dreams, but not despotically, nor with any special power of tormenting. But now that which I have called the tyranny of the human face began to unfold itself. Perhaps some part of my London life might be answerable for this. Be that as it may, now it was that upon the rocking waters of the ocean the human face began to appear; the sea appeared paved with innumerable faces, upturned to the heavens: faces, imploring, wrathful, despairing, surged upwards by thousands, by myriads, by generations, by centuries:—my agitation was infinite—my mind tossed—and surged with the ocean." 375.

Our readers may remember the visit of the Malay to our author among the northern mountains, and the alarm caused by his swallowing a large quantity of opium. This impression on the sensorium rose, with gigantic force, in his dreams, about the year 1818. The perusal of oriental history and literature had early left an unfavourable impression on our author's mind. The barbarous and capricious superstitions of Africa affect not the mind in the way that the

* We think that what the author applies to *forgetfulness* would more strictly apply to *obliteration*. We may *forget* former impressions, though these impressions may not be *obliterated* from the tablet of the memory.

to individual idiosyncrasy, the same phenomena, during sleep, which our author has described with so much spirit and feeling. Of this we are fully convinced from an accurate examination of what has happened to ourselves and many others whom we have questioned on the subject. So long as we can remember, the activity of our waking hours (almost perpetually employed in observation, reflection, or study) produced a corresponding interruption of sound sleep, by keeping a train of images passing through the mind, in the form of dreams. In health, these dreams were generally of the pleasing kind—or, at least, like the scenes in real life, a medley of the serio-ludicrous. But when the digestive organs were disordered, as often they were, and as the time tended to multiply the impressions on the sensorium almost *ad infinitum*, our dreams very frequently became most exquisitely tormenting, from the incongruity, distortion, and perversion of the scenes, sentiments, and images conjured up by the imagination. When, indeed, we compare the hyper-acuteness of our perception, and the immeasurable extension of time and space, in dreams, with the obtuse sensations and slow revolutions of events in waking life, we are almost tempted to consider the *former* (as far as we are ourselves concerned) to be, by far, the more important and interesting portion of our existence here below. We have seldom started from these gorgeous, delightful, or terrific visions, without a kind of consciousness that the soul had, in some measure, disentangled itself of matter, and soared into the boundless regions of eternity.

> ——————— cum prostrata sopore
> Urget membra quies, *et mens sine pondere ludit.**

We have quoted above a short extract to show the astonishing faculties of the mind sometimes developed in dreams, as compared with those which it evinces in our waking moments. We have, times without number, experienced this power of the mind during sleep to grasp a range of subjects

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* Speaking of mind or soul, we may remark that one of the most offensive passages in a late suppressed physiological work, where the author asks, "if we do not see the mind (or soul) built up before our eyes by the senses; arrive at maturity with the body; and grow old and decay with the same," is a mere literal translation of the following two lines in Lucretius:—

> "Præterea Gigni pariter cum corpore, et una
> "Crescere sentimus, pariterque senescere, mentem." *Lib.* i.

In fact, the modern materialist has not been able to add a single iota of what is *new* (or probably of what is *true*) to what has been bandied about since the days of Zeno.

of thought, and received another and very different class of impressions. We imagined ourselves traversing a ward in a hospital, and examining patients on both sides, several of whom we distinctly recollected, on waking, to be patients whom we had attended at different periods, and in the most distant parts of the world. The impression on our minds of being in the act of walking through the ward, at the moment when we awoke, was just as clear and unequivocal as that of our being on the tree viewing the map of the world around us; and therefore we have not the smallest doubt that these two trains of reflection and perception were perfectly coexistent, and that the mind acted on, and attended to, both at the same moment—a power to which it could not make pretensions in a state of wakefulness. We have related this phenomenon as a confirmation of some observations in these Confessions: and we leave the explanation to those who have more time and talent for metaphysical and physiological inquiries than we can pretend to. At the same time we beg to apologize for the introduction of a *dream*, at all, in the grave and sober pages of this Journal. We will not be accused of often offending in this way—if, indeed, it be an offence to touch on a subject that has engaged the attention of the greatest physicians and philosophers of the world.

To conclude the subject of dreams, then, we wish we could offer any remedy for preventing those that are of a frightful or disagreeable nature. We would caution all men against trying to overcome dreams and procure sleep, by artificial means, particularly wine or opium. The only safe plan is to avoid, if possible, the causes—the principal of which are, too great exertion of the mind, and disordered states of the digestive organs. In respect to the mind, perhaps the answer of the interpreter to Ptolemy, King of Egypt, who demanded "what would make a man sleep quietly in the night," will be as good a prescription as any. "Optimum de cælestibus et *honestis* meditare, et *ea facere*." As to the body, we shall offer another ancient prescription:—"*Ut sis nocte levis, sit tibi cœna brevis*." In some constitutions a very small slice of animal food at supper conduces more to sound sleep than an empty stomach. Acidities are productive of the worst species of dreams—nightmare. We have found nothing so effectual as carbonate of soda taken at bed-time. Three grains of the quicksilver pill will generally render the sleep sounder than a grain of opium.

The reader will be anxious to know what finally became of the opium-eater. He saw that he must die if he continued the opium; and therefore he determined, if death was to be the result, to rather die in the attempt to throw off the

this occasion at least, the experiments which have been made with opium on animals, will throw little light on its operation on the human frame. At all events, as far as practical purposes are concerned (and we believe this will be allowed to be the main point) we have nothing to trust to but common observation of the ordinary effects produced before our eyes in our daily walks. What then is the plain and obvious operation of opium (always meaning a moderate dose) which we see and feel, in others or in ourselves? The most constant and important effect is that of lessening the sensibility of the nervous system, and thus checking the transmission of sensations (or, more strictly speaking, *impressions*) to the sensorium, whether painful or pleasant. This reduction of *sensation* in the brain and nervous system does not appear to reduce the activity of *reflection*—on the contrary, the intellectual operations are quickened under the influence of opium—a proof that the action of the drug is not uniformly sedative or stimulant on all parts of the system. In respect to the vascular system, we generally find the pulse reduced in velocity and augmented in volume under the influence of opium—partly perhaps from the general reduction of sensibility, and partly from the diminution of secretion, the next operation of the medicine which deserves notice. If secretion be so much under the influence of the nervous system as some physiologists believe, we need hardly be surprised that a medicine which lessens sensibility generally, should diminish secretion. This diminution, under the operation of opium, is most conspicuous in the mucous membrane of the lungs and primæ viæ. It is very doubtful, we imagine, whether opium diminishes the urinary and cutaneous secretion—but it is at least certain, that, when combined with medicines which determine to the skin, opium, so far from restraining, augments perspiration. We need only instance the pulvis ipecacuanhæ compositus, as an example. Brief as are these physiological observations, we fear they embrace the greater part of what is positively and usefully known respecting the operation of opium on the human frame. But limited as this knowledge is, it is applicable to a very great variety of purposes in the exercise of our profession. There are few diseases unaccompanied by pain —and very few indeed in which opium may not be administered, in some form or other, with the advantage of mitigating sufferings, and without impeding recovery—where recovery is possible. Where the disease is irremediable, and at the same time painful, what an inestimable friend have we in opium! There is too great a prejudice by far against opium, in the practice of physic—and surgery also. For

our own parts, we have found it so powerful an auxiliary in practice, that, like Sylvius de la Boe, we should be inclined to relinquish the profession, were this medicine prohibited. We ask those who impartially observe, whether pain does not often aggravate the cause which produced it—drive the patient from remedy to remedy—from doctor to doctor—and not seldom induce the patient to turn sceptical as to the efficacy of medicine? Opium will frequently render sufferings so bearable, that the patient will steadily pursue a proper plan of treatment, and come to entertain confidence in his physician. We are aware, indeed, that in very painful affections practitioners have generally recourse to opium; but it is in the host of chronic complaints, accompanied rather by uneasy and uncomfortable sensations than absolute pain, that this medicine proves a valuable auxiliary to others that act in removing the original cause of the malady. A considerable scope of observation has convinced us that it is in this very class of diseases, where it is least of all employed, that opium is most of all useful.

We may remark, however, that we hardly ever prescribe opium, except in combination with other remedies calculated to benefit the patient's complaint, and counteract the injurious effects of the opium itself. It is from want of attention to this point, we believe, that the medicine under consideration has engendered prejudices in the minds of practitioners. Its reduction of intestinal secretion very generally produces costiveness, and on this account we almost invariably combine it with an aperient. Antimony and aloes are the best accompaniments when given in the form of pill—and the common saline effervescing draught with, or followed by, some saline aperient, we have found the best vehicle for opium in a liquid form. Here, too, we almost always combine an antimonial—for the grand secret of correcting the inconveniencies of opium consists in directing it to the skin or some secreting organ, at the same time that it tranquillizes the nervous system.

It is more easy to say in what diseases opium is doubtful or inimical, (because few in number,) than to enumerate those various affections where it may be advantageously administered.* In acute, and sthenic inflammation, especially of the brain, lungs, and perhaps of the serous membranes generally, we should not prescribe opium, until the disease is almost subdued by the regular antiphlogistic measures, particularly blood-letting—and not then, unless symptoms

* We wish it to be distinctly understood that we are here stating what we have personally witnessed; and not giving the result of what has been said or written on the subject of opium.—*Rev.*

of nervous irritation called for its use. In phlegmasiæ of the parenchymatous structures, and of the mucous membranes, especially those of the primæ viæ, the case is very different, and opium is a most valuable remedy. For instance, in dysenteric affections, which never go far without causing, and being kept up by, inflammation of the lining membrane of the intestines, opium is invaluable when combined with medicines which preserve an open state of the bowels. It allays irritation—diminishes the perpetual nisus to evacuate—and restrains the enormous secretion of acrid fluids which are highly distressing in these complaints. In such maladies it may be used much sooner after blood-letting than in the serous inflammations. But even in the serous phlegmasiæ, as thoracic and peritoneal inflammation, when by copious venesection we have blanched our patient, and rendered further detraction of blood hazardous, without completely subduing the disease, a large dose of opium may be administered, not only with impunity, but with the greatest benefit. It will generally, in such cases, allay that irritability of the system, vascular and nervous, which seems to renew the inflammation from time to time, while bleeding becomes less and less adapted to its final reduction.*

The action of opium on the system being, as we before observed, that of lessening the sensibility of the nerves, and increasing the activity of the imagination, we should expect *a priori*, that it was not a medicine adapted for mania, and experience confirms theory in this instance. But in hæmorrhagic affections opium is a most invaluable remedy. In hæmoptysis the superacetate of lead and opium will very commonly check the discharge from the lungs, the general volume of the circulation being reduced by venesection.

But it would be endless to enumerate the many useful purposes to which opium may be applied in the cure or mitigation of diseases, and therefore we shall drop the subject for the present, lest our opiologic lucubrations should set our readers to sleep—and, what would be worse, conjure up in their dreams a chaos of what we have been discussing in our vigils.

Ut canis in somnis leporis vestigia latrat.

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* We had lately several cases under our care where this remark was amply verified. In one of these instances we were in attendance with Mr. Le Mann, of Orchard-street, a most judicious and energetic practitioner, where a delicate and frail lady was bled copiously three times for pulmonic phlogosis, and yet inflammation hung about the lungs. A dose of three grains of opium, once or twice repeated, completely dissipated what would have required one, or perhaps more general bleedings, and that in a state of very great debility, where venesection was to be avoided if possible.—*Rev.*

XV.

*Hydrocephalus.**

The celebrated Frank, of Vienna, has remarked, that "when hydrocephalus is curable, the diagnosis is uncertain—but that when the diagnosis is certain, the case is hopeless." In this country, where the practice in acute diseases is far more efficient than on the Continent, there is every reason to believe that very many cases of hydrocephalus acutus (that is the cerebral excitement which ends in effusion) are annually cured. We do not indeed say, that after effusion, to any extent has taken place in the brain, we can save the patient; but we can often prevent the effusion.

Dr. Fallot has circumstantially detailed a case, which, he thinks, was hydrocephalus successfully treated. The patient was a girl eight years of age, born of sound parents, but herself and two sisters having large heads and delicate constitutions. The girl, M. B. was exposed to severe cold on Christmas-day, 1820, and complained of headach, chilliness, and lassitude in the evening. For several days afterward she continued dull, and complained of pain about the occipital region. On the 1st of January, 1821, she vomited her food, and still continued unwell and irritable. On the 4th the vomiting returned, and being now worse than usual, Dr. Fallot was called in. He found the girl lying on her back, and unwilling to move from that position, having constant inclination to vomit, flushed face, intolerance of light, red dry tongue, burning skin, small hard quick pulse, lancinating pains in the head, especially over the orbits. Six leeches behind the ears—a semicupium. In the evening, there being little melioration, six leeches were applied to the temples, a purgative lavement exhibited, and lemonade ordered for drink. 5th January. The night was passed without sleep, or with short and broken slumbers. A purplish eruption was now visible over the whole surface, without diminution of the fever or gastric irritability. Six leeches to the epigastrium—gum water acidulated with tartaric acid. In the evening the headach, especially of the right orbit and temple, was more violent than ever, causing the child to utter piercing cries. Four leeches to the orbit; mustard pediluvia. 8th. The eruptive disease has run its stages, and dequammation of the cuticle, as in scarlatina, has commenced; but without any mitigation of the constitutional symptoms; the fever having a daily exacerbation or paroxysm at two o'clock, P. M. The patient complains continually of her head, to which she frequently applies her hand. Constipation is obstinate, the clysters producing no effect. Irritability excessive; the little patient not permitting either of her sisters to approach her bed. On the morning of the 9th our author found his patient altered much for the worse. The pulse was be-

* Journ. Complem. October, 1821. Dr. Fallot.

quick and irregular that he could not count them—the face drawn —the eyes incapable of bearing the least degree of light—continual cries of " my head ! my head !" even when apparently slumbering. Our author now, for the first time, suspected hydrocephalus acutus, and determined to act vigorously. He proposed a seton in the neck, which was refused. He therefore enveloped the feet in sinapisms, and prescribed a grain of calomel every three hours, changing the lemonade drink for an antimonial solution. The head was covered with ice, which was renewed as fast as it thawed.

12th. There being no sensible amendment yet, the seton was permitted, the girl evincing little sensibility to the pain. When she fell into a slumber of a few minutes, she awoke with a start, and crying out with the pain in her head. One grain of calomel and one of digitalis night and morning. An infusion of arnica montana—the antimonial drink continued.

15th. She this day opened the left eye. and with it viewed the objects around her bed, but kept her hand on the other eye. Had two mucous greenish stools to-day—a cloud in the urine, which has become somewhat more abundant—the pulse a little more regular and better developed—the cries less piercing—no other change of any consequence. The child refused all medicine, and only took beer for drink.

The night between the 16th and 17th was a most severe one; the breathing being oppressed—the anxiety extreme—the patient attempting to raise herself, but wanting the power. When elevated by others, the head fell to one side or other. The heat of skin was burning and unequal—somnolency, interrupted by startings and crying out. About three o'clock in the morning, convulsive movements over the whole body. At daylight, horrible squinting, the right pupil being dilated, and scarcely sensible to a lighted candle. The intellects, however, appeared sound, when the patient was roused from her slumbers. The features were much altered, the skin burning, pulse small and irregular, grindings of the teeth, piercing cries. Cold solutions applied to the head instead of ice—mustard pediluvia—half a drachm of mercurial ointment to be rubbed on the inside of the thighs, and two grains of calomel with one of antimonial powder every three hours. In the evening the mercurial frictions were repeated on the arms. 18th. Continuation of the same means—antimoniated ptisan for drink.

19th. A remission of the symptoms—cessation of the convulsive movements—inability to move the left arm and leg, which have, however, preserved their temperature. Diarrhœa, at first watery, afterward green and feculent. 21st. The favourable change continues, and the fever abates—the urine lets fall a copious sediment —the stools are abundant and fæcal—some tranquil sleep—an abscess forming at the angle of the lower jaw. Still the patient complains greatly of her head, and feels some ease by the pressure of the hand on the forehead. On the 4th February there was a discharge of purulent matter from both ears; and from this time the cephalalgia gradually abated, and finally ceased in March, the discharge

A gentleman in London has lately used the concentrated acetic acid in cases of tinea, as an external application, with great success. The Prussic acid has also been found a powerful application in cutaneous affections, but its price is a great objection.

Dr. Ed. Nath. Bancroft, author of the able work on Yellow Fever, who has been dead and buried in the medical journals, is alive and well.

Suicides. It appears by a statistical work of M. Fournier, that in the year 1818, 330 suicidal attempts had been made in Paris, 241 of which terminated in death. During the year 1821, there were but 32 suicides committed in London, whose population is nearly a third more than that of Paris.

Jacksonian Prize.—Three of these are proposed by the College of Surgeons this year, viz. Injuries and diseases of Muscle—Diseases of the Skin—and Diseases of the Rectum. Conditions as usual.

Mr. Ring. We have to record this quarter the death of Mr. Ring, well known in the literary and professional world by his different writings. He died of apoplexy.

M. Laennec. We are happy to hear that M. Laennec, now so well and so favourably known to the British Profession, is returned to Paris with renovated health, and with unabated zeal for the promotion of pathological science.

Erysipelas. Mr. Brodie has experimented on the American mode of treating erysipelas by mercurial frictions, as stated some time ago in this Journal. The utility of the application was unquestionable, but it was attended with the inconvenience of producing salivation sometimes. He therefore substituted simple for mercurial ointment, and found that, in several instances, it appeared to enable the patient to go through the various stages of the disease in a more favourable manner than under ordinary circumstances. *London Med. and Phys. Journal.*

XVII.

CORRESPONDENCE.

The short anonymous article for the Extra-Limiets department is inadmissible. If we have opened a door for authors to *defend* themselves against what they may conceive to be unfair criticism, in this or any other journal, we cannot permit such papers to become *attacks* upon individuals, nor to be couched in other than mild (however energetic) language. *Such* defences would injure us without benefitting them. But we again repeat that every author has free

access to the Extra-Limites department of the Journal, provided he avoids all intemperate language and personal allusions—articles which never can be admitted into our pages. The paper and enclosure will be delivered to any one producing the motto or signature.

Several of our literary friends will see that their hints are attended to; and several others, we are sorry to say, may feel disappointed at not finding the analytical articles, which they have so liberally furnished, inserted in the present number. They, however, and the profession at large, will readily perceive that *early* reviews of all works are totally incompatible with that careful *analytical* delineation which is the characteristic feature of this Journal, and to which it mainly owes its success. We could make a tinsel show of 50 or 100 *critical* articles on each number of this review—and such management might please those Athenians who lounge about the medical booksellers' shops, or dip into periodicals for something to *amuse* a dull hour. But what would our sober plodding country and colonial readers say to this, who expect articles which they are to peruse slowly and attentively, and preserve for *re-perusal* and reference in the intervals of their practice? We know well what they would say; and we shall give them no cause for complaint, on this head. They may rely on it, that not even Atalanta's *golden* apples shall entice us from the firm and straight forward path on which we have so far trodden with safety to ourselves, and advantage to them. We grant, indeed, that it is both necessary and proper for some people to—"chronicle small beer"—because there are appetites for every species of food, and some prefer "soup meagre" or "Bologna sausages," to roast beef and plum pudding. Every literary caterer, therefore, is right in providing for the particular goût of his customers.

XVIII.

EXTRA LIMITES.

Medical Botany.

In our Review for September, 1820, we had occasion to notice the Lectures given on this subject by Dr. Emerson, Member of the Royal College of Physicians, &c.&c. and laid before our readers a general outline of the Course. We are happy to find that the Doctor has continued his labours in this branch of Medical Education; and that he has considerably extended his course, which for the future

will be confined to the summer months; thereby not interfering with the more important avocations of the student. We consider it totally superfluous on our part to enlarge on the great utility of this department of Natural History to the Profession, as it now very properly forms an *indispensable* qualification of its different members. This series of Lectures embraces, agreeably to the schedule below, *Practical*, *Theoretical* and *Medical Botany*; the last occupying the fourth and fifth division of the Course; which concludes with a history of the *Principal Medicinal Plants* employed by the native practitioners of India. The *general plan* of the Course we now beg to present to the public; it is as follows:—1. The first division has for its object—1st. The examination of the constituent parts of a *Flower* on which *Generic Character* is founded.—2d. The examination of the different parts of a *Plant* from which *Specific Charactres* are taken.—3d. Nomenclature. II. The second division consists in the illustration of the *Linnæan* System. III. The third division is occupied by the consideration of the *Anatomy* and *Physiology* of Plants. IV. The fourth division comprehends *Vegetable Chymistry*. V. The fifth and last division includes the demonstration of the principal *Natural Orders of Jussieu*, and of the Medicinal Plants. In this section the *analogy* between the *forms* and *preparations* of Plants is explained agreeably to the latest discoveries of scientific Botanists. The detail of the above outline forms a part of the Introductory Lecture, which will be delivered in the first week of May at the Anatomical Theatre of Joshua Brookes, Esq. F. R. S. F. L. S. Soc. Cæs. Nat. Cur. Mosq. Soc. &c. &c. Blenheim-Street, Great Marlborough-Street. Occasional *examinations of the pupils* are held at the Lecturer's house in Sloane-Street; where also they have access to an extensive Herbarium, and a select botanical library. In addition to these advantages, we undertsand D. E. has made arrangements for the introduction of the students into the principal botanical gardens in the vicinity of the metropolis; when they will be allowed to *dissect flowers* under his immediate inspection.

XIX.

BIBLIOGRAPHICAL RECORD;

OR

Works Received for Review, within the Quarter.

1. Thoughts and Suggestions relative to the Cause, Nature, and Treatment of Intestinal Inflammation, including an Affection to which Lying-in-Women are subject. By a Philanthropist. Dublin, 1820. 8vo. pp. 42.

☞ *We are much obliged by the unknown Author's present of the above, and also the polite note which accompanied it.*

2. A Medical Guide to the Cheltenham Waters, containing Observations on their Nature and Properties; the Diseases in which they are beneficial or hurtful; with the Rules to be observed during their Use. By WILLIAM GIBNEY, M.D. one of the Physicians to the Cheltenham Dispensary, &c. Small 8vo. pp. 162. Cheltenham, 1821.

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3. On the re-establishment of a Canal in the Place of a Portion of the Urethra which had been destroyed. By HENRY EARLE, Esq. Surgeon to the Foundling, and Assistant Surgeon to St. Bartholomew's Hospital. Quarto, pp. 14. From the Philosophical Transactions. London, 1821.

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4. On the Nerves; giving an Account of some Experiments on their Structure and Functions, which lead to a new Arrangement of the System. By CHARLES BELL, Esq. Quarto, pp. 29. From the Philosophical Transactions, 1821.

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5. Notes on the Medical Topography of the Interior of Ceylon; and on the Health of the Troops employed in the Kandyan Provinces, during the Years 1815-16-17-18-19, and 1820: with brief Remarks on the prevailing Diseases. By HENRY MARSHALL, Surgeon to the Forces. Octavo, pp. 228. London, 1821.

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6. A Treatise on Diseases of the Nervous System. *Part the First.* Comprising Convulsive and Maniacal Affections. By J. C. PRICHARD, M.D. Late of Trinity College, Oxford; Fellow of the Linnæan and Wernerian Societies, &c. Physician to St. Peter's Hospital and the Bristol Infirmary. One volume, 8vo. pp. 425. London, 1822.

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7. The Introductory Lecture of a Course upon *State Medicine*, delivered in Mr. Grainger's Theatre, Southwark, on Thursday, November 1st, 1821. By JOHN ELLIOTSON, M.D. &c. &c. Octavo, pp. 35. Longman and Co. London, 1821.

☞ *This Introductory Lecture appears to be well calculated to impress on the young mind the necessity of studying forensic medicine as an essential part of a regular medical education. We wish Dr. Elliotson every success in his laudable endeavours to disseminate medico-legal knowledge throughout the rising generation.*

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8. An Essay on the Effects of the FUCUS HELMINTHOCORTON upon Cancer, more especially in the stage denominated Occult; with a concise Inquiry into the Origin and Nature of the Disease, and the probable way in which the Dispersion of the Tumour may be effected, &c. &c. By WILLIAM FARR, Member of the Royal College of Surgeons, London; and late Surgeon to the Hospital on the Island of Anholt. One vol. 8vo. pp. 112, with a plate of the Fucus. London, 1825.

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9. Considerations sur une Alteration Organique appele Digenerescence Noire, Melanose, Cancer Melane, &c. Par G. BAUSCHEY, Chef des travaux Anatomiques a la Faculte de Medecine de Paris, &c. &c. Octavo, pp. 24, with one coloured Plate representing the Melanose. Paris, 1821.

10. The Philadelphia Journal of the Medical and Physical Science. Edited by Dr. N CHAPMAN. No. 5, November, 1821.

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11. The American Medical Recorder, of original Papers and Intelligence in Medical Science. No. XV. for July, and No. XVI. for October, 1821.

12. A final Reply to the numerous Slanders circulated by N. Chapman, M.D. By GRANVILLE SHARPE PATTISON. Octavo, Second Edition. Baltimore, 1821.

☞ *We hope this will prove a finale to those acrid controversies and personal contentions which we have been sorry to observe among our American brethren. Let a stranger, but a well-wisher, in the "old world" recommend a cessation of these hostilities in the land of liberty and independence. They occasion, at the best, but a momentary and painful gratification, even in the breast of the victor. They invariably bring after them contrition and remorse in the minds of both parties.*

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13. Reflections sur les Fievres, Par J. B. G. BARBIER, Professeur a l'Ecole Secondaire de Medecine d'Amiens, &c. Octavo, Paris, 1821.

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14. Revue Medicale Historique et Philosophique, Nos. for September and October, 1821.

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15. Della Maniera piu atta a Curare Radicalemente le varici ad Impiagamenti varicosi dell'Estremita inferiori. Memoria di Ranieri Cartoni Medico-Chirurgo. Pisa, 1821.

☞ *We are much obliged to our esteemed friend, Dr. Clarke, of Rome, for this publication.*

---

16. Cases illustrative of the Treatment of Diseases of the Ear, both local and constitutional, with Practical Remarks relative to the Deaf and Dumb. By JOHN HARRISON CURTIS, Esq. Aurist to His Majesty, &c. &c. &c. Octavo, pp. 93. London, 1822.

☞ *These cases are fifty-eight in number, detailed with more or less minuteness, and designed to illustrate the principles laid down in Mr. Curtis's Treatise on the Ear. They are therefore totally incapable of analysis. The treatment, in general, appears to be judicious, simple and successful. The principal items in the methodus medendi are, syringing the ear frequently—the application of detergent or gently stimulating ointments—blisters—leeches—lunar caustic—unguentum hydrargyri nitratum. &c. To these local means Mr. Curtis frequently adds alterative doses of calomel or blue pill, with a cathartic twice a week. We have no doubt that, if the above means are judiciously adapted to the existing indications in each case, they will ensure as much success as can reasonably be expected in the present state of our knowledge.*

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17. Memoire sur le Vomissement considere dans l'Etat Sain et dans les Maladies cancereuses de l'Estomac. Par M. PIEDAGNEL, Interne de Premiere Classe des Hopitaux et Hospice Civile de Paris, Prosecteur a l'Athenee Royale. Paris, 1821. Octavo, sewed, pp. 29. *From the author through Mr. Carpue.*

☞ *A very ingenious little essay confirming the new doctrine of M. Magendie respecting the action of vomiting. We shall make some extracts from it in our next number.*

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18. Medicamina Officinalia, seu Pharmacopœia Londinesis, Index Methodicus. Cura F. A. MACANN, M.D. Londini, 1822, pp. 92. Duodecimo.

☞ *The plan of this little index is, to exhibit all the officinal simples in one continued alphabetical series, and to enumerate under each simple, all those articles which are, in any manner, derived or formed from it. It thus forms a kind of analytical view of the Pharmacopœia, which may be usefully appended to that work. Dr. Macann has also added notes, critical and explanatory, which may be perused with advantage.*

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10. An Epitome of Pharmaceutical Chemistry, whereby the art of prescribing scientifically may be facilitated, and those decompositions avoided, which, resulting from combinations of incompatible substances, often frustrate the views of the practitioner in their medical effects; arranged according to the London Pharmacopœia. By REES PRICE, M.D. member of the Royal College of Surgeons in London; Honorary Member of the Medical and Physical Society of Guy's Hospital; Member of the University of Heidelberg, &c. Duodecimo, pp. 59, 1822.

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20. Chart of Pharmaceutical Chemistry; exhibiting the Names of the various Articles of the London Pharmacopœia, in contrast with those with which they are incompatible; whereby the art of prescribing scientifically may be facilitated, and those decompositions avoided, which often frustrate the views of the Practitioner in their medical effects. By REES PRICE, M.D. &c. &c. &c. Price 2s. London, 1822.

☞ *This Epitome and Chart, especially the latter, will be found useful for reference in the extemporaneous prescription, and ought to be in the surgery or the dispensary of the medical practitioner. The author appears indebted for almost the whole of his compilation to the works of Dr. Paris, and Mr. A. T. Thompson; still the decompositions being brought into a single point of view, are more easily referred to than in the sources above mentioned.*

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21. A Treatise on Indigestion and its Consequences, &c. &c. By A. P. W. PHILIP, M.D. *Second Edition, with some additional Observations.* London, 1822.

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22. Essays on Surgery and Midwifery; with Practical Observations and select Cases. By JAMES BARLOW, Surgeon. With Plates. One vol. 8vo. pp. 417. London, 1822.

☞ *This appears to be a valuable work, of which we shall give an account in our next number.*

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23. The Principles of Medicine, on the Plan of the Baconian Philosophy. Vol. I. on Febrile and Inflammatory Diseases. By R. D. HAMILTON. Octavo. pp. 292. London, 1822.

24. **An Essay** on the Symptoms and History of Diseases; considered chiefly in their Relation to Diagnosis. By MARSHALL HALL, M.D.F.R.S.E. and formerly Senior President of the Royal Medical Society of Edinburgh. Octavo, pp. 130, very small type. London, 1822.

This is a republication, considerably improved, of the FIRST *part of the author's work on Diagnosis. As the work has never been analyzed in the quarterly form of our Journal, we hope to be able to give a particular account of this second edition in our next number.*

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25. **A Manual** of the Climate and Diseases of Tropical Countries; in which a Practical View of the Statistical Pathology and of the History and Treatment of the Diseases of those Countries is attempted to be given: calculated chiefly as a Guide to the young Medical Practitioner on his first resorting to those Countries. By COLIN CHISHOLM, M.D. F.R.S, &c. &c. &c. One volume, 8vo. closely printed, pp. 336, with a Plate. London, 1822.

☞ *This most excellent Manual we conscientiously recommend to every one destined for the Torrid Zone. In our next we will give a detailed account of the work.*

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26. **A Letter** to Charles Henry Parry, M.D.F.R.S. &c. &c. on the Influence of Artificial Eruptions in certain Diseases incidental to the Human Body; with an Inquiry respecting the probable Advantages to be derived from further Experiments. By EDWARD JENNER, Esq. M.D. L.L.D. F.R.S. &c. Physician Extraordinary to the King. Quarto, pp. 67. Baldwin, London, 1822.

☞ *A full account of this Letter in our next.*

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27. **The New-England Journal** of Medicine and Surgery, &c. Nos. III. and IV. New Series, July and October, 1821.

INDEX.

A.

Abdomen, gunshot wounds of, by Baron Larrey 260
Abortion, a species of 416
Abscess behind the œsophagus, 518
Acids, their chymical qualities, 315
Acupuncture, Mr. Churchill on 431
Adams, Sir William, his claims 449
Adipocere, Dr. Ure on . . . 321
Alentego, med. topography of . 589
Albert, M. on Tinea Capitis . 534
Alkalies, their properties . . 316
Amaurosis 378
——— Dr. Weller on . . 650
——— Mr. Stevenson on . . 788
Amputation at the hip-joint . 194
——— during the progress of gangrene . 186
——— proper period for operating . . . 176
——— without ligature of arteries . . . 248
Andalusian fevers, Dr. Jackson 485
Aneurism of the groin . . . 269
——— Sir Astley Cooper's pathology of 743
——— Mr. Coates's case of . 870
——— Mr. Salmon's case of . 876
Angina pectoris, causes of . . 565
Antigua, med. topography of . 592
Apothecaries-Surgeon, report of 454
Arachnitis, Duchatelet and Martinet on 695
Argus, No. 1. on medical conduct 222
——— No. 2. obstinate pervigilium 224
——— No. 4. Sir Charlatan Glanderman . . . 224
Arsenic, Dr. Gregory on . . 271
Arteries, inflammation of . . . 50
——— wounds of . . . 266
——— on the vacuity of . . 443
Arteritis, Mr. Golding's case of 439
——— case of 683
Attraction, Dr. Ure on . . . 316

B.

Bacot, Mr. on syphilis . . . 598
Bell, Mr. Charles, on the nerves 809
Berezina, passage of, by the French 245
Berlinghieri, Prof. on lithotomy 337
Bibliographical Record—p. 230
Biography of Dr. J. Gregory . 216
Bladder, wounds of 262
Blepharophthalmitis 630
Blood-letting, in hæmorrhagic diseases 396
Boyle, Mr. on Indian Cholera 85
Brain, erethism of, by Dr. Nicholl . . . 527 361
——— masked disease of . . 440
——— morbid anatomy of . . 559
——— on concussion and compression 740
Bridlington epidemic, account of 203
Bronchocele, cured by idodine . 322
——— Mr. Hutchison on 866
Broussais, M. on gastritis and enteritis 1
Brunonianism in Italy . . . 747

C.

Cadiz fevers, Dr. Jackson on . . 485
Calculi renal, Mr. Earle on . 436
——— Sir Astley Cooper on extraction of 874
Calculous disorders, Dr. Prout on 98
Calhoun, Dr. on paralysis . . 279
Caloric, Dr. Ure on 317
Campaign, Russian, in 1812 . . 237
Cancer, the present modes of treating 733
Cardiac diseases, M. Fodere on 417
Carmichael, Mr. case of amputation at the hip-joint . . . 511
Cartilages, ulceration of . . . 425
Cataract 380
——— Dr. Weller on . . 642
Cephalonia, plague at . . . 580
Chancre, Mr. Bacot's observations on 608
Chemistry, Dr. Ure's dictionary of 315
Chest, wounds of, by Baron Larrey 257
——— pathological examination of 562
——— Drs. Laennec and Forbes on 795
Chevalier, Mr. Hunterian oration 220

Children, bones of, bent . . 141
Chlorine, Sir H. Davy on . . 317
Cholera of India, M. Boyle on 85
Churchill, Mr. on Acupuncture 431
Cinchonine, chymical and medical properties of 670
Clarke, Mr. Mansfield, on female diseases 757
Clysma, article on, by M. Barbier 348
Coates, Mr. case of aneurism . 870
Colchicum seeds, where to be procured 437
Colleges of Physicians and Surgeons, their laws 734
Conception, extra-uterine . . 425
Conjunctiva, diseases of . . . 873
Conquest, Dr. outlines of midwifery 47
Constitutional symptoms of syphilis 611
Contagion of plague, how long dormant 583
Contagion of plague, laws of . 584
Cooper, Sir A. on hernia cerebri 251
——— his lectures . . . 736
——— *removal of a tumour* 880
——— on extraction of calculi 874
Corfu, plague at 576
Cornea, diseases of 374
Croton, oil of, a new old remedy 428
Cubebs, Mr. Jeffreys on, in gonorrhœa 271
Cynanche laryngea, severe cases of 516

D.

Death, sudden 589
Dew, Dr. Ure on 318
Dewees, Dr. on gastrotomy . . 278
Diagnosis between hydrocephalus and worm-fever . . . 476
Dictionary of chymistry . . 315
Diet, in indigestion 297
Digestive organs, mucous membrane of . 1
——— Dr. Thomas on 348
Doctrine, new Italian delineated 745
Drink, in indigestion . . . 298
Duchatelet, on arachnitis . . 695
Dunn, Mr. on amputation of the tarsus 873

E.

Ear, Mr. Swan on 873
Earle, Mr. H. on the urethra . 858
——— on renal calculi . 436
Economy, female, Dr. Power on 409
Editor's case of hæmato-scrofulous tumour 514
Emetics in hysteria 282
Emphysema, remarkable case of 238
——— idiopathic cases of 335
Epigastrium, contusions on . 662
Erethism of the brain, Dr. Nicholl on 361
Eruptive diseases, Dr. Robinson on 335
Erysipelas, Mr. James on . . 857
Etiology of indigestion . . . 292
Eudiometer, a new one . . 319
Excrescence, cauliflower . . 778
Experiments on the digestion of rabbits 311
Eye, Dr. Weller's treatise on . 626
Eyes, diseases of, Mr. Travers on 369 105

F.

Falloon, Dr. on diseases of the heart 532
Farr, Mr. on cancer 732
Femur, fracture, with separation of condyles 242
Ferguson, Dr. on marsh poison 585
Fever, Mr. H. Sandwith on . 203
——— Dr. Reid on . . . 327
——— congestive, Prosper Alpinus on 685
Fevers of Spain, Dr. Jackson on 485
Forbes, Dr. translation of Laennec 795
Forensic case, Mr. Chas. Bell's 561
——— medicine, Dr. Smith on 387
Frost-bites, treatment of . . 246
Fucus helminthocorton, Mr. Farr on 732
Fumigation, sulphureous, Mr. Wallace on 570
Fungus hæmatodes retinæ . . 653

G.

Galvanic experiments on digestion 311
Gangrene, traumatic, amputation, during , ... 187
Gangrene, Dr. Grattan's case of 521
Gastritis, acute and chronic . 6
Gastrotomy, Dr. Dewees on . 278
Glaucoma, Dr. Weller on . . 644
Glysters, odservations on . . 353
Golding, Dr. case of arteritis . 439
Golis, Dr. on hydrocephalus acutus 465
Gonorrhœa, Mr. Jeffreys on . 271
Gozo, plague at 575
Grattan, Dr. case of gangrene . 521
Gravel, Dr. Prout on . . . 98
Gregory, Dr. on marasmus . . 66

Gregory, Dr. on malformation of the heart 871
Gregory, Professor, his death . 216
Guadiana, medical topography of 588
Gunshot wounds, Messrs. Guthrie, Hennen, Laurent, and Percy, on 165

H.

Hæmorrhage internal, case of . 668
Hancock, Dr. on pestilence . . 569
Harrison, Dr. his case of hæmorrhage 334
——— Mr. on syphilitic eruptions 598
Head, on wounds of, by Baron Larrey 249
Heart, diseases of, Dr. Reeder . 401
——— Dr. Fodere . 417
——— Dr. Falloon . 532
Helminthocorton, or Corsican moss 732
Hepatic abscess, from wounds of head 253
——— functions, Drs. Pearson and M'Donnel on 281
Hernia cerebri, treatment of . 251
——— Mr. Shaw on 553
Hip-joint, amputation at . . 194
——— operation, Mr. Carmichael 511
Hordeolum, treatment of . . 383
Hordeolum, ... 632
Hunterian oration, Mr. Chevalier's 220
Hutchison, Mr. on bronchocele 866
Hydatids of the uterus . . . 774
Hydrocephalus acutus, Dr. Gölis on . . . 465
——— Sir G. Blane on 669
Hydrophthalmia, Dr. Weller on 647
Hydrothorax, pathology of . . 803
Hypopion 375
Hysteritis, Mr. Clark on . . . 763

I.

Iliac, external, propriety of tying 270
——— artery, on the ligature of 556
Indigestion, Dr. Philip on . 862 284
Inflammation of arteries . . 50
——— of the spinal arachnoid . . . 724
——— Mr. James on . 834
Intermittents, masked 450
Iodine, Dr. Coindet on, in bronchocele 322
Ireland, Dr. case of emphysema 335
Iritis, Dr. Weller on 648
Irritation. Sir Astley Cooper on 737
Ischuria, Sir Astley Cooper on 744
Italy, present state of medicine in 745

J.

Jackson, Dr. on the Andalusian fevers 485
James, Mr. on inflammation . 834
Jeffreys, Mr. Henry, on cubebs 271

K.

Kennedy, Dr. J. case of arteritis 60
Kentucky, university of . . . 219
Kerrison, Dr. on tic douloureux 68
Kinine, the medical properties of 670

L.

Labour, difficult case of . . . 438
Lacon, author of, remonstrated with 522
Lacrymal passage, obstruction of 385
Laennec, Dr. on thoracic diseases 795
Larrey, Baron, his Russian campaign 237
Lavemens, on the use of . . . 353
Lectures, Sir Astley Cooper's . 736
Leeching, observations on . . 357
Lendrick, Dr. case of poisoning 534
Lippitudo 384
Lisbon, medical topography of . 589
Lithotomy, new method of operating 337
——— Mr. Martineau on 877
Liver-cough, Dr. Brooke's case of 524
Lungs, inflammation of, from wounds of other parts . . . 192

M.

M'Donnel, Dr. on the hepatic functions 281
M'Keever, Dr. case of ruptured vagina 530
Multa, plague at 574
Manual of anatomy, Mr. Shaw's 551
Marasmus, Dr. Gregory on . . 862
Marathia, plague at 577
Marsh poison, Dr. Ferguson on 585
Martineau, Mr. on lithotomy . 877
Medicine forensic, Dr. Smith on 387
Medicines, large doses of . . . 752
Medico-chirurgical transactions 865
Medico-politico-theatrico-metaphysical RECORD 274
Medulla spinalis, inflammation of 429
Melena, Dr. Nicholl on . , . 529
Membranes, false, in pleurisy . 798

Menstruation, Dr. Power on . 409
——— deficient . . . 759
Mercury, case of gangrene from 522
——— various authors on . 598
Midwifery, Dr. Conquest's outlines of 47
——— Dr. Ramsbotham on 141
Military surgery, Messrs. Hennen and Guthrie on 165
——— Baron Larrey on 240
Monteath, Dr. translation of Weller on the eye 626
Mucous membrane of the digestive organs 1
Mucous discharges (white) of females 758

N.

Nerves, on affections of . . . 63
——— Mr. Chas. Bell on their functions 809
Nervous sympathy, how produced, ... 295
Nervous system, Mr. Bell's remarks on 566
Neuralgia, singular case of . . 426
Nicholl, Dr. elements of pathology 138
——— on erethism of the brain 361
——— on erethism of the brain 527
——— on melena . . 529
Noia, plague at, in 1815, . . 522

O.

Observations, practical, in midwifery 141
——— in medicine, &c. by Mr. T. Sandwith . . . 395
O'Halloran on the Spanish fever 817
Omentum, protrusion of . . . 261
Ophthalmic inflammation, cure of . 370
——— suppurative . . 372
——— hospital extinct . . 448
Opiologia; or confessions of opium-eaters 681
Opium, particular preparation of, ... 219
——— its effects on the human system 683
Osborn, Dr. on the urine . . . 41
Osteo-sarcomatous tumour . . 511
Os uteri, case of separation, by Mr. Scott 876
Oxymuriate of mercury, swallowed 534

P.

Palpitations of the heart, Dr. Fodere on 417
Panckouckerie 447
Paralysis, tourniquets in . . . 279
Par vagum, remarks on . . . 566
Patella, dislocation of 682
Pathology of the urine . . . 41
——— Dr. Nicholl's elements of 133
——— of indigestion . . . 296
Percussion in chronic pleurisy . 800
Pericardiac inflammation . . 395
Perineum, ruptured 684
Peritoneal inflammation, Mr. Guthrie on 171
Perivoli, pleague at 578
Pestilence, Dr. Hancock on . . 665
Phagedena, Mr. Welbank on . 875
Philadelphia Journal of Medical and Physical Sciences . . . 275
Philip, Dr. on indigestion . 862, 284
Phlebitis, curious case of . . . 453
Phlegmasies chroniques, M. Broussais on 1
Physiological experiments on digestion 311
Pierson, Dr. on the hepatic functions 281
Pinel, M. on the medulla spinalis 429
Plague, Mr. Tully and Dr. Hancock on 569
Pleurisy, pathology of . . . 796
——— chronic 800
Plumbe, Mr. on porrigo, . . . 534
Pneumo-thorax 804
Polypi of the heart 564
Pomegranate bark, Mr. Breton on 872
Poultices, evaporating, in gunshot wounds 176
Power, Dr. on menstruation, abortion, &c. 409
Price, Mr. case of sudden death 870
Prince Ruperts port of . . . 591
Protracted labours, remarks on 48
Prout, Dr. on gravel, calculus, &c. 98
Pterygium 374
——— 641
Pupils artificial, Dr. Weller on 449

Q.

Quackery, on the suppression of 734
Quarantine, Mr. Tully's remarks on 583

R.

Rabbits, Dr. Philip's experiments on 310

Ramsbotham, Dr. on midwifery 141
Recto-vesical operation . . . 337
Reeder, Dr. on diseases of the heart . . . 401
——— letter to the reviewers 686
Reid, Dr. on fever 327
Repletion, fatal species of fever from 247
Respiration, remarks of Dr. Ure on 325
Respiratory nerves, Mr. C. Bell on 809
Ringworm of the scalp, works on 534
Robinson, Dr. on eruptive diseases 335

S.

St. Lucie, med. topography of 590
Sandwith, Mr. Humphrey, on fever . . . 203
——— Thomas, observations in medicine and surgery 395
Sangsue, article on, by M. Merat 348
Sarcocele, M. Maunoir on . . 682
Sclerotitis 376
Scott, Mr. on separation of os uteri 876
Scourge of Venus and Mercury 597
Scriblomania 228
Secale cornutum, or ergot of rye 442
Shoulder joint, terrible laceration of 240
Sintelaer, Dr. on venereal diseases 597
Smith, Dr. on emetics . . . 282
——— John Gordon, on forensic medicine 387
Spain, fever of, Mr. O'Halloran on 817
——— degraded state of medicine in 830
Spinal system, Dr. Reid on . 331
———arachnitis 724
Spleen, case of hæmorrhage from 334
Staphyloma 376
———Dr. Weller on . . 654
Stevenson, Mr. on amaurosis . 788
Stimulants and contra-stimulants 749
Stomach, unsuspected ulcer of 446
Strumous ophthalmia . . . 371
Subclavian artery, wound of . 267
Surgical observations, by Mr. T. Sandwith 398
Swan, Mr. on affections of nerves 63
——— on the ear . . . 873
Swediaur, Dr. on venereal complaints 598
Syder, Mr. Myngay, his notes of Lectures 736
Sympathy, observations on . . 295
Sympto atology of indigestion 284
Syphilis, Dr. Thomson on the origin of 616

T.

Tarsus, Mr. Dunn on amputation of 873
Tendo Achillis, rupture of, treatment of 740
Tetanus, successful case of, Mr. Burmester 876
Thomas, Dr. on the digestive organs 348
Thomson, Dr. J. on mercury 593
Thoracic diseases, Drs. Laennec and Forbes on 795
Throat, wounds of 256
Tibia, amputation at the head of 243
Tic douloureux, Dr. Kerrison on 63
———Mr. Swan on 68
Tincture of poppy, Dr. Wilson on 669
Tommasini on the new Italian doctrines 745
Tracheotomy, cases of Mr. Carmichael . . 516
——— case of, by Mr. Porter 878
Transactions of the New-York medical society 275
Transactions of the Irish College, vol. iii. 327
Transactions of the King's and College 511
Travers, Mr. on diseases of the eye 369 105
Treatment of indigestion . . 297
Trephine, seldom necessary . 250
Tully, Mr. on plague . . . 569
Tumour, immense, removed by Sir. A. Cooper 880

U.

Ulcer in the stomach, unsuspected 446
Urethra, muscular fibers in . . 555
——— Mr. Earle on . . . 858
Urine, on the physiology and pathology of . . . 41
——— involuntary discharge of 788
Uterine disease, obscure case of 455

V.

Vacca, Professor, on recto-vesical operation 3

Vagina, ruptured, case of - - 530
Ventriloquism - - - - - - 219
Villers, Dr. on tic douloureux - 63
Viscera, morbid anatomy of - 553

W.

Wallace, Mr. on sulphureous fumigation - - - - - - 507
Water-stroke, (wasserschlag) D. Gollis on - - - - - 466
Watery discharge from the uterus - - - - - - - - 777
Weller, Dr. on diseases of the eye - - - - - - - - 626
Wilbank, Mr. on sloughing phagedena - - - - - - - 875
Wounds, gunshot, Messrs. Guthrie, Hennen, Laurent, and Percy on - - - - - 165
Wounds of head, Baron Larrey on - - - - - - - 249
—— in dissecting, treatment of - - - - - 552
—— from dissection, treatment of - - - - - - - 739

Y.

Yellow fever, Dr. Ferguson on 594
—— Dr. Jackson on - 465
—— Mr. O'Halloran on - - - - - - - - 817

Directions to the Binder.

The Tables of Contents are to be taken from the four Numbers published, and to be bound up with the Volume after the Title-page.

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